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PROCEEDINGS OF THE SECOND ANNUAL CONFERENCE OF FLORIDA HIGH SCHOOL PRINCIPALS APRIL 7 AND 8, 1921

Edited and compiled by
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High School Visitor

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CONTENTS

Page

Foreword 3

Program 4

Roster of Attendance 6

Minutes of the Conference 8

Report of Committee on Resolutions 11

Conference Committees 12

Welcome Address, by Dean J. W. Norman, Teachers' College, University of Florida 13

Fundamental Principles underlying the Reorganization of the High School Curriculum, by Jos. Roemer, Professor of Secondary Education and High School Visitor, University of Florida 17

Reorganization of the Science Course for the High Schools of Florida, by R. M. Evans, Principal, Quincy High School 54

Preliminary Report of the Committee on the Social Studies, by R. M. Sealey, Principal, Tallahassee High School 98

Reorganization of Foreign Languages for the High Schools of Florida, by F. W. Buchholz, Principal, Gainesville High School 116

Address: Latin in the High School, by Honorable W. N. Sheats, State Superintendent of Public Instruction 125

Address: Athletics in the High School, by Honorable W. N. Sheats, State Superintendent of Public Instruction 137

Reorganization of Mathematics for the High Schools of Florida, by C. M. Jones, Principal, Perry High School 146

Reorganization of Vocational Work in the High Schools of Florida, by S. A. Draper, Principal, Leesburg High School 152

Present Status and Possible Improvement in our High School Libraries, by Sexton Johnson, Principal, Orlando High School 176

FOREWORD

The success attending the annual session of the High School Conference is most gratifying. During the meeting held April 7-8, 1921, many of the plans formulated a year before were carried forward. The various committees that had been appointed to make reports on the high school curriculum gave evidence of having spent considerable time and labor upon their tasks; their contributions and the discussions resulting therefrom being especially illuminating.

An effort has been made herein to reproduce, verbatim, the discussions; consequently, the bulletin is much larger than the first one.

To Professor Joseph Roemer, of the department of Secondary Education of the University of Florida, full credit should be given for compiling the material of these bulletins. His paper, and also the rest of the proceedings, should be of interest to all of the high school principals and teachers of the state.

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PROGRAM

(Peabody Hall)

THURSDAY MORNING, 9:00 O'CLOCK

Words of Welcome—President A. A. Murphree.

1. Organization.
2. Appointment of Committees.
3. Group Meetings:
   The committees appointed on the various subjects will have preliminary meetings preparatory to their reports to be made later to Conference.

THURSDAY AFTERNOON, 2:00 O'CLOCK

4. Address—Fundamental Principles Underlying the Reorganization of the High School Curriculum—Joseph Roemer, Professor of Secondary Education, University of Florida.
5. Report of Committees:
   a. Mathematics—C. M. Jones, Lakeland, Ch'm Com.
   b. Discussion—Round Table.

THURSDAY EVENING, 7:45 O'CLOCK
(University Gymnasium)

6. Address—Dr. O. I. Woodley, late President Marshall College Normal School, West Virginia.
7. Smith-Towner Bill—Affirmative, H. C. Johnson, 15 min.
   Negative, S. W. Cason, 15 min.

FRIDAY MORNING, 9:00 O'CLOCK

8. Report of Committees:
   a. Social Sciences—R. M. Sealey, Tallahassee, Ch. Com.
   b. Discussion—Round Table.
9. Report of Committees:
   a. Foreign Languages—F. W. Buchholz, Gainesville, Chairman Committee.
   b. Discussion—Round Table.
10. Address—Superintendent W. N. Sheats.

FRIDAY AFTERNOON, 2:00 O'CLOCK

11. Report of Committees:
    a. Natural Sciences—R. M. Evans, Quincy, Ch'm Com.
    b. Discussion—Round Table.
12. Report of Committees:
    a. Vocational Subjects—S. A. Draper, Leesburg, Ch'm Com.
    b. Discussion—Round Table.
13. Address—Present Status and Possible Improvement in Our High School Libraries—Sexton Johnson, Orlando.
14. Address—A Uniform State System of Records and Reports—S. A. B. Wilkinson, Perry.

Florida State High School Meet

FRIDAY

3:00 P. M.—Friday Preliminaries for State Track Meet.
(Fleming Field)

8:00 P. M.—State High School Declamation Contest.
(University Gymnasium)

SATURDAY

9:00 A. M.—Annual Meeting of Florida High School Athletic Association.
(Peabody Hall)

1:00 P. M.—Finals in Florida State High School Track and Field Meet.
(Fleming Field)

REGISTER OF ATTENDANCE OF THE SECOND ANNUAL CONFERENCE OF THE FLORIDA HIGH SCHOOL PRINCIPALS

(Only partial list)

Draper, S. A., Principal Leesburg High School.
Ezell, B. F., Principal DeLand High School.
Ewing, E. C., Principal Lake Worth High School.
Johnson, A. F., Principal Williston High School.
Fillers, A. H., Principal Kissimmee High School.
Sims, L. R., Principal Panama City High School.
Frye, T. C., Principal Arcadia High School.
Woodward, S. L., Principal Plant City High School.
Workman, J. H., Principal Pensacola High School.
Evans, R. M., Principal Quincy High School.
Sealey, R. M., Principal Tallahassee High School.
Wilson, W. D., Principal Fort Myers High School.
Jones, C. M., Principal Lakeland High School.
Corr, P. W., Principal Zephyrhills High School.
Wardroper, J. H., Principal Newberry High School.
Metcalfe, H. G., Principal Live Oak High School.
Hensley, P. H., Principal Ocala High School.
Wilkinson, S. A. B., Principal Perry High School.
DeLaney, Miss Eunice, Principal Orlando High School.
Buchholz, F. W., Principal Gainesville High School.
Bennett, L. E., Principal Fort Pierce High School.
Alstetter, M. L., Orlando High School.
Holmes, J. A., Live Oak High School.
Johnson, C. D., Teachers College, University of Florida.
Odom, E. S., Teachers College, University of Florida.
Johnson, H. C., Teachers College, University of Florida.
Hamon, R. L., Teachers College, University of Florida.
Hamon, Mrs. R. L., Teachers College, University of Florida.
Pollard, Miss Mattie A., Teachers College, University of Florida.
Simmons, G. B., Teachers College, University of Florida.
Adams, B. D., Teachers College, University of Florida.
Wells, J. R., Teachers College, University of Florida.
McLane, E. F., Teachers College, University of Florida.
Bratley, H. E., Teachers College, University of Florida.
Wheatley, J. S., Crescent City High School.

Simmons, E. R., County Superintendent, Gainesville, Florida.
Fulk, J. R., Professor School Administration, Teachers College, University of Florida.
Norman, J. W., Dean Teachers College, University of Florida.
Haynie, E. A., State Supervisor Vocational Agriculture, University of Florida.
Roemer, Jos., Professor of Secondary Education and High School Visitor, University of Florida.
Bristol, L. M., Professor of Sociology, University of Florida.
Quigley, T. H., Professor of Industrial Education, University of Florida.
McRee, J. E., Atlanta, Georgia.
Hankinson, P. H., Atlanta, Georgia.
Strang, Carl, Atlanta, Georgia.
Perry, M. D., Atlanta, Georgia.
Cawthon, W. S., State High School Inspector.
Sheats, Hon. W. N., State Superintendent of Public Instruction, Tallahassee.

MINUTES OF THE SECOND ANNUAL CONFERENCE OF THE FLORIDA HIGH SCHOOL PRINCIPALS

THURSDAY, APRIL 7th, 1921

MORNING SESSION

The meeting was called to order by President Metcalfe of Live Oak, after which an address of welcome on behalf of the University was extended by Dean J. W. Norman of Teachers College.

The following officers were then elected: President, Principal R. M. Sealey of Tallahassee; Secretary, Principal W. D. Wilson of Fort Myers.

After an announcement by State High School Inspector W. S. Cawthon, concerning changes in the program, the meeting adjourned in order that the various committees might further consider the subjects assigned to them.

AFTERNOON SESSION

The meeting was called to order by the President. An address was then given by Dr. Joseph Roemer of the University of Florida, on the subject, "The Fundamental Principles Underlying the Reorganization of the High School Curriculum," followed by a brief discussion.

A motion by Principal S. A. Draper of Leesburg was unanimously carried that each Committee work out both a "Six-three-three" and an "Eight-four" plan of curriculum.

In the absence of Principal C. M. Jones of Lakeland, the Committee on Mathematics did not report as scheduled, so the report on Natural Sciences was made by Principal R. M. Evans of Quincy.

On motion by Principal Frye of Arcadia, the Natural Science Committee was requested to include Agriculture as one of the subjects for their consideration.

Principal C. M. Jones then spoke briefly concerning proposed legislation concerning the qualifications of County Superintendents. Principal S. A. Draper then moved that a Committee of nine be appointed to further consider the matter. The Chairman asked Principal Jones to name the Committee, which resulted in the following appointments: Principal R. M. Sealey, Dr. Joseph Roemer, Principal J. H. Workman, Principal R. M. Evans, Dean N. M. Salley, Pro-

fessor W. S. Cawthon, Principal P. H. Hensley, and Principal W. D. Wilson.

The meeting then adjourned.

FRIDAY MORNING SESSION

The meeting was called to order by the President. Principal A. H. Fillers of Kissimmee was then elected as Vice-President of the Conference.

A report was then made by Principal R. M. Sealey of the Committee on Social Sciences, followed by general discussion.

The report of the Committee on Foreign Languages was submitted by Principal H. G. Metcalfe, followed by general discussion, and a special report by Principal P. H. Hensley of Ocala.

State Superintendent W. N. Sheats then addressed the Conference.

FRIDAY AFTERNOON SESSION

The meeting was called to order by President Sealey.

The following resolutions were presented by Principal C. M. Jones which were unanimously adopted:

"Whereas, the office of State Superintendent of Public Instruction of the State of Florida does not receive a salary commensurate with service; and whereas, all similar offices in other states receive a larger salary than paid in this State; Be it resolved, that it is the sense of the high school principals of the State of Florida that the salary of this office should be increased to the sum of $5,000.00 per annum by the present Legislature and request that a bill be introduced to this effect."

"Whereas, we believe that it is an educational crime for county superintendents to be elected without professional and academic training; Be it resolved, by the high school principals of the State of Florida, that a bill be introduced in the present Legislature requiring county superintendents to have the above qualifications."

On motion of Principal J. H. Workman, Professor W. S. Cawthon and Dr. Joseph Roemer were elected joint editors of the High School Department of the Florida School Journal.

The report of the Committee on Mathematics was then submitted by Principal C. M. Jones of Lakeland, followed by discussion.

Principal S. A. Draper of Leesburg then gave a report on Vocational Guidance.

A motion by Dr. Roemer that the Committee on Vocational Subjects be supplemented by additional appointments by State High School Inspector W. S. Cawthon, was carried.

A paper by Principal Sexton Johnson of Orlando on the subject, "The Present Status and Possible Improvement in Our High School Libraries," was read by Mr. M. L. Alstetter of the Orlando High School.

An address on "A Uniform State System of Records and Reports" was then given by Principal S. A. B. Wilkinson of Perry.

The Committee on Resolutions then submitted the report attached herewith.

On motion it was ordered that the Secretary notify the Chairman of the Conference Committees that the Committees would be continued.

A rising vote of thanks was extended to the two stenographers.

The meeting was adjourned until the next annual Conference.

(Signed) W. D. WILSON,
Secretary.

REPORT OF THE COMMITTEE ON RESOLUTIONS

No. 1. Resolved that it is the sense of this body that the 6-3-3 plan of organization would be a solution of the problems at present confronting many of our high school administrators.

No. 2. Resolved that in the opinion of this body, the state Textbook law should be so revised as to permit greater elasticity in the selection of high school textbooks.

No. 3. Resolved that this body is opposed to the postponement of the date of the next adoption of high school textbooks.

No. 4. Resolved that a fee of one dollar be solicited from each high school principal and teacher in the state to defray the expenses of publishing the proceedings of this meeting, and that each principal and teacher be furnished with a copy.

(Signed) RESOLUTIONS COMMITTEE.

CONFERENCE COMMITTEE

General Conference Committee:

W. S. Cawthon, University, *Chairman,* and Director of Conference
John H. Workman, Pensacola
Chas. M. Jones, Perry
F. W. Buchholz, Gainesville
R. M. Sealey, Tallahassee
R. M. Evans, Quincy
S. A. Draper, Leesburg
W. D. Wilson, Fort Myers
Jos. Roemer, Gainesville

English Section:

John H. Workman, Pensacola, *Chairman*
Miss Levina Shores, Jacksonville
Ira McAlpin, DeFuniak Springs

Mathematics:

Chas. M. Jones, Perry, *Chairman*
D. M. Cook, Tampa
Miss Eunice Delaney, Orlando

Foreign Languages:

F. W. Buchholz, Gainesville, *Chairman*
H. G. Metcalfe, Live Oak
A. C. Alleshouse, Miami

Social Studies:

R. M. Sealey, Tallahassee, *Chairman*
S. L. Woodward, Plant City
E. W. McMullen, Clearwater

Science:

R. M. Evans, Quincy, *Chairman*
R. J. Longstreet, Seabreeze
Miss Maude Saunders, DeFuniak Sp'gs

Vocational:

S. A. Draper, Leesburg, *Chairman*
W. O. Lockhart, Lemon City
Miss Lucy Cushman, Tallahassee

Avocational:

W. D. Wilson, Fort Myers, *Chairman*
E. L. Robinson, Tampa
Samuel Long, Winter Haven

SECOND ANNUAL CONFERENCE OF HIGH SCHOOL PRINCIPALS

THURSDAY A. M., APRIL 7th, 1921

The Second Annual Conference of Florida High School Principals met at the University of Florida on Thursday, April 7th, 1921. The opening session was held in Peabody Hall at 9:30 A. M.

The meeting was called to order by the President, Mr. H. G. Metcalfe of Live Oak, who expressed his pleasure at being present and announced that an address of welcome was to have been made by President Murphree, but that all could readily understand why he was not present. In his absence, Dean Norman of Teachers College was called upon for a few words of welcome.

WELCOME ADDRESS

By J. W. Norman, Dean Teachers College, University of Florida

I was asked just a few minutes ago to make the welcome address for this occasion. I am afraid not having prepared that I shall not do so as gracefully and as heartily as I should do in welcoming this body. I know that everyone who attends occasions like this wishes to feel that he has a very hearty welcome, and although I may not be able by words to express the welcome all of us here at the University wish to extend to you, still I want to assure you that nothing gives us more pleasure than to have the principals and teachers of the State with us.

It is my opinion that meetings of this kind are one of the greatest agencies for educational advancement. Teachers who conscientiously and persistently assemble themselves together for a study of their mutual problems sooner or later gradually forge to the front in their profession. Ideas are advanced, questions are asked and discussions follow. Sometimes these discussions become rather heated, but after they are over we discover that we have learned something. It is somewhat like a chemical reaction. Whenever two chemicals are put together there is frequently a tremendous boiling, but after the boiling is over there is a different kind of a product. Someone has called this "synthetic creation." By synthetic creation we mean this: If one has an idea and another has a different

idea and these two ideas come in contact, there is something like a chemical reaction and the result is a synthetic creation; that is, when the two ideas come together, a third and entirely different idea is formed from their composition that is neither one nor the other, but a different product. In these meetings, a great deal of this kind of thinking goes on.

In explanation of this idea let me give an example. Last year at the meeting of this Conference, there was considerable discussion about General Science. Some were violently opposed and others as ardently in favor of it, and I have thought in the past year a great deal about the discussion on that occasion. I have frequently referred to it in my classes during the year and I have asked others, both in the classroom and out of the classroom, this question, "What do you think of the course in General Science? What has been your observation?" and out of this my knowledge about the subject has been very greatly increased. I have been trying to solve that question and no doubt a number of you have been thinking of the same thing. At this meeting I am sure that other questions will come up of like nature and that many ideas will be created synthetically. The ideas advanced, the questions raised, and the discussions which follow them will inevitably greatly improve our educational thinking.

The University is exactly the proper place where meetings of this kind should be held in order that we may have more of this kind of thinking. I therefore give you the most hearty welcome I can, and I am sure the other members of the faculty join me in welcoming you to the University. I trust that many more of you will be present before the day is over.

Mr. Metcalfe: I am sure I speak for the Association when I say that we deeply appreciate these words of welcome; it is always a pleasure for us to come here; it is like coming back home, and I am sure that we all feel that way. I may say that the officers of this Association do not hold their positions because of their good behavior but are supposed to change annually, and consequently organization is next in order. The officers of this Association, as I understand it, consist of a President and a Secretary-Treasurer. Nominations are now in order for President.

Mr. Buchholz: I move that we elect Mr. R. M. Sealey of Tallahassee for President by acclamation.

Mr. Cawthon: I second the motion.

Mr. Metcalfe: Mr. Sealey has been unanimously elected President. I request the newly elected President to come forward and take charge of the meeting.

Mr. Sealey: I suggest that the present President continue in charge.

Mr. Metcalfe: I should like to remind you gentlemen that the retiring President has already "been through it once" and, furthermore, when this present organization has become great and famous, as it undoubtedly will, it will be considered a source of great gratification to me to be able to say, "I was the first President."

Mr. Sealey (in the Chair): The next thing in order of business is the election of the next officer of the Association, the Secretary-Treasurer. Nominations are now in order for said officer.

Mr. Cawthon: I nominate Mr. W. D. Wilson.

Mr. Metcalfe: I move the nominations close and that we elect Mr. Wilson by acclamation.

Mr. Sealey: Mr. Wilson is unanimously elected and will immediately assume his duties.

Mr. Cawthon: In regard to a change in program, let me say that President Murphree, Mr. Roemer, myself, and others, had hoped to have a gentleman of some prominence in high school and college circles to address us this evening in the College Gymnasium, but we failed to secure such an one. In the place of Doctor Woodley, there will be an address by Mrs. J. Stuart Lewis of Tallahassee, prominent in the Federation of Women's Clubs in the State. I do not know the subject of her address, but I feel sure that she will bring us a worth while message. Her address will take place in the College Gymnasium this evening at 7:45. Immediately after that there will be the debate which is scheduled next on the program. The subject is the Smith-Towner Bill. It will be handled by S. W. Cason and H. C. Johnson, two Senior students of Teachers College, who are members of the University Triangle Debating Team.

We plan now to break up the Conference in Committees. We want to give each Committee on curriculum organization time to work out its report. Rooms in this building have been assigned the various Committees. We are now closing in time for each Committee to get in a two-hour session preparatory to the reports which are to follow during this Conference. We hope each person or Committee will feel free to visit other Committee rooms or class rooms and get such help or advice as is deemed advisable.

Mr. Norman: Before we adjourn I should like to emphasize what Mr. Cawthon has just said about making yourselves at home. We shall be very glad to have you in any of our class rooms. Wherever you find a class room, go in, because when we go to your schools, this is what we do. We should be very glad to have you come to any of our classes, and also to tell us what you find wrong, and then next year when you come again, we hope that it will not be that way.

Mr. Hensley: Before we adjourn I should also like to ask a question about the meeting of the Florida High School Athletic Association. Does that include all members and schools that belong to the Association?

Mr. Cawthon: All of them, and of course any other schools are welcome to be there.

Mr. Sealey: The Conference is now adjourned until two P. M.

THURSDAY, TWO P. M., APRIL 7th, 1921

Mr. Sealey: The house will now come to order. May I request that all members move to the front part of the room and occupy the front rows of seats? It gives me great pleasure to introduce Doctor Joseph Roemer, Professor of Secondary Education and High School Visitor of the University of Florida, who will speak to us on the subject, "Fundamental Principles Underlying the Reorganization of the High School Curriculum."

FUNDAMENTAL PRINCIPLES UNDERLYING THE REORGANIZATION OF THE HIGH SCHOOL CURRICULUM*

By Jos. Roemer, Prof. of Secondary Education and High School Visitor of the University of Florida

Mr. Chairman, Gentlemen of the Conference, and Visiting Friends: I have been looking forward to this occasion with a great deal of pleasure for the past several months, because I have anticipated the pleasure of meeting a great many of the high school men of the State, whom I have only known through correspondence; and I have also anticipated it with a great deal of pleasure due to the reports given me by Mr. Cawthon and those who attended the Conference last year.

This afternoon, I am going to follow the statement printed on the back of each program, that this Conference is not to be a long-winded speech making affair, but more of a round table discussion. I shall endeavor to follow out the spirit of the statement. In order to be brief and as pointed as I can, I have worked out this little outline which I am going to follow:

BASIC PRINCIPLES IN CURRICULUM ORGANIZATION

I. Two lines of discussion.
  1. State course of study as a whole.
    a. Total possible units of course.
    b. Prescribed units of course—CONSTANTS.
    c. Limited electives } VARIABLES
    d. Free electives }
  2. Content of each unit in curriculum.

II. Function of high school curriculum chief determinant.
  1. Cardinal Principles.
    7 objectives:
      (1) Health.
      (2) Command of fundamental processes.
      (3) Worthy home-membership.
      (4) Vocation.
      (5) Citizenship.
      (6) Worthy use of leisure.
      (7) Ethical character.
  2. Correlative Principles.
    a. Adaptability.
    b. Flexibility.

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*Part of this address was published separately under the title: "A Study of Florida High Schools."

c. Unification.
d. Differentiation.
e. Specializing phase.
f. General phase.

III. Ideal versus Real Condition.
1. Conditions State-wide—Nation-wide.
2. Problems involved.
a. Length of term.
b. Size of school.
c. Number of teachers.
d. Curriculum.
3. Junior High School—Solution of Problem.

IV. Junior and Senior High School Basis of Procedure.
1. Present curriculum of small schools.
2. Virginia plan for small rural Junior High Schools.
3. Dual plan advisable for Florida.
a. 6-3-3 plan.
b. 8-4 plan.

I have no original or profound speech to make. In some of our church gatherings one minister will always read "The Articles of Faith." I am going to follow that example and enunciate as the program states, the "Fundamental Principles"—in other words, the "articles of faith" of our religion. I think it is a pretty good thing to get together and break the "pedagogical bread" once in a while, and as Dean Norman said this morning, have heart to heart talks and discussions, even though we get into some "scraps." We cannot all see alike but out of the differences in ideas and opinions will come something new and worth while. I had an argument just this morning with my good friend from Plant City in which I was unable to convince him to see my way. I called him a pessimist. He said, "Your idea of a pessimist is one who does not agree with you." Whether it is pessimism or not, I shall say what I think and then let you other men say what you think, and close with a united "think" which in the end ought to be a great "think."

From this outline you see I am going to follow pretty largely the bulletin known as "The Cardinal Principles of Secondary Education." "This Bulletin is not a spasmodic effort of one or two men, but the combined thinking of the

men of the whole secondary school world for the last quarter of a century. Most all of the great things of the world are movements that are the product of the minds of numerous men. What we stand for today is not something that some one man said or thought ten or twenty years ago, but the accumulated growth to which numerous ones have added their little bits. And it has grown better and broader because each man has contributed his bit. We started about 1880 in the N. E. A. appointing committees to study some phase of the secondary school. Since then there have been numerous committees appointed. There was a Committee of Ten; a Committee of Eight; a Committee of Seven; a Committee of Five, etc. Each Committee investigated certain phases of the secondary school and reported back to the National Association. The influence of these committees has been far reaching in secondary education. For example, the final report of the Committee of Five, which had to do with History, practically fixed the kind and sequence of History in our public high schools for the last quarter of a century. In 1913 there was a new committee formed by the N. E. A., known as the Commission on the Reorganization of Secondary Education. "This Commission was a direct outgrowth of the work of the Committee on the Articulation of High Schools and Colleges, which submitted its report to the N. E. A. in 1911. That committee set forth briefly its conception of the field and function of secondary education and urged the modification of college entrance requirements in order that the secondary school might adapt its work to the varying needs of its pupils without closing to them the possibility of continued education in higher institutions. It took the position that the satisfactory completion of any well planned high school curriculum should be accepted as a preparation for college. This recommendation accentuated the responsibility of the secondary school for planning its work so that young people may meet the needs of democracy."*

Through sixteen of its committees this Association is issuing reports dealing with the organization and adminis-

*Bulletin, 1918, No. 35, Cardinal Principles of Secondary Education.

tration of secondary schools and with the aims and methods and content of the various studies. The findings, recommendations and reports of these committees are embodied in Bureau of Education bulletins released by the N. E. A. To date there have been released some eight or nine reports. To assist these committees through constructive criticism, a reviewing committee was organized in 1913. In addition to this task of criticising the reports, it seemed desirable that the Reviewing Committee itself should outline in a single brief report those fundamental principles that would be most helpful in directing the reorganization of secondary schools. The bulletin referred to above, entitled "The Cardinal Principles of Secondary Education," is the direct product of this general Reviewing Committee. It sets forth the cardinal tenets or foundation principles of the whole secondary school. It is a small bulletin of only about thirty-two pages, but it is perhaps the most valuable piece of literature that has come from the secondary educational world in the last quarter of a century. This outline at my back is based directly upon the spirit of this bulletin. Consequently, there is nothing new to be said here this afternoon. I shall merely restate what this bulletin contains and add a little bit of local coloring. When that is done, we will then be ready to go into our specific problems in Florida.

But before applying a remedy, it is necessary first to diagnose the case. We cannot intelligently discuss the reorganization of our curriculum until we know definitely some things about our high school conditions. After this running, oral, discussion of the seven main objectives of the high school, let us see to what extent the high school is accomplishing its mission.

In order to have complete and recent data on this question, I gathered some facts just recently. These charts you see scattered along the wall here were made up from those blanks you principals filled for me not many days ago. I have data on every high school in Florida regardless of size or classification, and consequently, it is a real picture of present conditions. Let us now go into an analytic study of our Florida high schools after which we will discuss the remedy.

A STUDY OF FLORIDA HIGH SCHOOLS

ORGANIZATION

There is not a more pleasing chapter of the history of Florida education than the development of the public high school. Starting as it did in the closing years of the last century, it grew to such proportions as to justify state supervision and inspection as early as 1907, and now has reached such a magnitude as to demand more than one inspector. The story of its growth in number of teachers employed, amount and value of library and laboratory equipment installed, new buildings added, etc., reads like a fairy tale to one who traces it back through the Biennial Reports of the State Department of Education. When the future is considered in the light of past development it brings a flush of heart to those who have absolute faith in the great democratic movement of the modern high school.

In order to get a little better idea of its present condition and possible future lines of development, the writer thought it would be of interest to take a cross section, as it were, of its present status. This is not, in any way, intended to be an exhaustive study, but merely an attempt to call attention to a few of the outstanding phases of high school development in Florida.

The bulletin is divided into three chapters. The first chapter deals with the general organization of the high school including such topics as number of high schools, kind of high schools, enrollment, etc.; the second chapter has to do with the training, tenure, supply, etc., of teachers; and the third chapter deals with the course of study.

In presenting the data contained herein, it was deemed advisable to group the high schools for discussion under the following headings: FOUR YEAR HIGH SCHOOLS; THREE YEAR HIGH SCHOOLS; TWO YEAR HIGH SCHOOLS; ONE YEAR HIGH SCHOOLS.

In order to make the study as helpful as possible and to have the conclusions drawn from as full data as possible, a very thorough search and great effort was made to secure data for every high school in the state regardless of size. Through the kindness of Professor W. S. Cawthon, State High School Inspector, the name and location of all high schools

in the state was secured, then data obtained concerning them by means of a blank which was filled by each principal.

At this point the writer wishes to express his deepest appreciation to the high school principals for their extreme courtesy in filling so promptly and carefully the blank sent them. Their willingness to cooperate made the study possible. Special mention is also due to Messrs. S. W. Cason, G. C. Hamilton, H. C. Johnson, and H. L. Tolbert, senior students in Teachers College of the University of Florida, for their assistance in preparing the material for publication.

Tables I to IV give the enrollment for each particular high school of the state for February 1921. Table V is a summary of tables I to IV. The tables follow without further comment.

TABLE I

Enrollment in Florida High Schools

(4 Year High Schools)

Location of School	GRADES												Grand Total		
	9th			10th			11th			12th					
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Alachua [1]	16	28	44	16	23	39	4	3	7	3	6	9	39	60	99
Apalachicola [2 5]	13	15	28	1	7	8	0	7	7	0	3	3	14	32	46
Apopka	7	7	14	3	4	7	3	3	6	0	2	2	13	16	29
Arcadia [1 6]	23	31	54	15	28	43	10	29	39	7	11	18	55	99	154
Avon Park	7	16	23	5	5	10	2	3	5	1	5	6	15	29	44
Barberville [3]	7	7	14	6	6	12	1	5	6	2	3	5	16	21	37
Bartow [1 6]	25	24	49	22	34	56	20	28	48	6	20	26	73	106	179
Bonifay	12	15	27	3	13	16	2	4	6	2	3	5	19	35	54
Bowling Green	7	12	19	2	8	10	1	4	5	3	4	7	13	28	41
Bradentown [1 6]	35	57	92	24	34	58	18	19	37	11	11	22	88	121	209
Brooksville	14	9	23	16	7	23	6	6	12	8	7	15	44	29	73
Bushnell	2	5	7	5	9	14	2	2	4	0	1	1	9	17	26
Chipley [1]	20	29	49	18	20	38	5	5	10	4	3	7	47	57	104
Clearwater [1 6]	24	39	63	18	21	39	16	20	36	13	22	35	71	102	173
Cocoa [1]	9	10	19	6	13	19	5	11	16	2	3	5	22	37	59
Crescent City	6	8	14	1	5	6	3	3	6	3	0	3	13	16	29
Dade City [1]	16	32	48	7	14	21	4	4	8	3	11	14	30	61	91
Daytona [1 6]	28	38	66	13	36	49	14	15	29	6	9	15	61	98	159
DeFuniak Spgs.	25	29	54	16	21	37	11	14	25	8	11	19	60	75	135
DeLand [1 6]	22	28	50	23	24	47	5	29	34	5	14	19	55	95	150
Delray	5	10	15	4	5	9	6	6	12	0	4	4	15	25	40
Dunnellon [1]	8	13	21	3	5	8	6	5	11	0	2	2	17	25	42
Eau Gallie	7	0	7	1	2	3	1	5	6	2	0	2	11	7	18
Eustis [1]	15	7	22	7	13	20	8	8	16	3	2	5	33	30	63
Fellsmere	2	5	7	1	1	2	1	1	2	1	1	2	5	8	13
Fernandina	2	12	14	2	6	8	1	2	3	0	3	3	5	23	28
Ft. Lauderdale [6]	25	28	53	12	18	30	12	10	22	11	14	25	60	70	130
Ft. Meade [6]	19	24	43	13	20	33	7	15	22	6	13	19	45	72	117
Ft. Myers [1 6]	30	31	61	18	23	41	8	11	19	8	8	16	64	73	137
Ft. Pierce [6]	12	31	43	15	14	29	6	11	17	2	12	14	35	68	103
Gainesville [1 6]	50	39	89	21	43	64	24	34	58	8	17	25	103	133	236

TABLE I—Continued

Enrollment in Florida High Schools
(4 Year High Schools)

Location of School	GRADES												Grand Total		
	9th			10th			11th			12th					
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Gonzalez	9	6	15	8	4	12	3	4	7	1	4	5	21	18	39
Graceville	11	6	17	9	11	20	3	2	5	3	3	6	26	22	48
Gr. Cove Spgs.	3	16	19	3	1	4	1	2	3	0	1	1	7	20	27
High Springs [1]	9	7	16	3	6	9	1	7	8	2	1	3	15	21	36
Homestead [1]	8	10	18	8	9	17	3	7	10	4	4	8	23	30	53
Inverness [3]	9	5	14	3	11	14	2	6	8	5	4	9	19	26	45
Jacksonville [6]	242	255	497	118	167	285	66	91	157	50	78	128	476	591	1067
Jasper [3]	10	10	20	1	5	6	1	8	9	3	1	4	15	24	39
Key West	19	33	52	21	21	42	6	12	18	6	11	17	52	77	129
Kissimmee [1 6]	14	32	46	7	19	26	9	15	24	4	9	13	34	75	109
LaBelle [1]	7	9	16	1	7	8	4	1	5	2	3	5	14	20	34
Lake Butler [1]	5	12	17	1	5	6	3	4	7	1	2	3	10	23	33
Lake City	31	30	61	12	21	33	14	15	29	7	4	11	64	60	124
Lakeland [1 6]	49	72	121	43	42	85	20	34	54	21	37	58	133	185	318
Largo [1 6]	5	27	32	4	9	13	6	12	18	5	5	10	20	53	73
Leesburg [6]	12	14	26	12	13	25	9	8	17	14	6	20	47	41	88
Lemon City	15	13	28	6	7	13	5	7	12	1	2	3	27	29	56
Live Oak [1 6]	17	18	35	14	19	33	5	9	14	1	7	8	37	53	90
Lynn Haven	0	4	4	2	3	5	2	2	4	0	2	2	4	11	15
Madison [1]	15	6	21	8	7	15	13	24	37	3	7	10	39	44	83
Marianna [1]	4	18	22	6	12	18	3	17	20	4	7	11	17	54	71
Mayo	7	6	13	5	6	11	1	5	6	3	3	6	16	20	36
Melbourne [1]	12	21	33	6	16	22	3	5	8	9	4	13	30	46	76
Miami [6]	115	172	287	84	107	191	76	81	157	46	48	94	321	408	729
Milton	18	20	38	11	16	27	9	18	27	7	4	11	45	58	103
Monticello	5	11	16	3	13	16	2	4	6	3	5	8	13	33	46
Montverd (Ind.)	29	26	55	6	18	24	6	7	13	5	8	13	46	59	105
Mulberry [1]	9	18	27	11	16	27	3	1	4	5	10	15	28	45	73
Muscogee	3	5	8	6	1	7	2	2	4	1	1	2	12	9	21
New Smyrna [1 6]	22	21	43	4	17	21	7	5	12	10	4	14	43	47	90
Oakland-Winter Garden [1]	5	11	16	1	4	5	1	5	6	3	6	9	10	26	36
Ocala [1 6]	35	34	69	11	32	43	13	18	31	11	20	31	70	104	174
Okeechobee [3]	9	7	16	5	9	14	3	1	4	0	3	3	17	20	37
Orlando [6]	66	77	143	45	54	99	24	40	64	17	24	41	152	195	347
Oviedo	2	4	6	2	2	4	0	0	0	0	3	3	4	9	13
Palatka [1 6]	20	25	45	11	21	32	6	14	20	5	11	16	42	71	113
Palmetto [1 6]	12	31	43	14	24	38	1	10	11	9	20	29	36	85	121
Panama City [3]	12	16	28	7	8	15	7	6	13	2	4	6	28	34	62
Pensacola [1 6]	72	106	178	40	58	98	33	78	111	17	21	38	162	263	425
Perry [3]	9	16	25	9	14	23	7	5	12	3	11	14	28	46	74
Plant City [1 6]	41	42	83	31	31	62	6	25	31	7	20	27	85	118	203
Punta Gorda [1]	10	14	24	13	7	20	2	6	8	6	4	10	31	31	62
Quincy [1 6]	12	23	35	9	15	24	12	11	23	10	15	25	43	64	107
Redlands	8	10	18	2	4	6	3	2	5	1	3	4	14	19	33
St. Augustine	24	35	59	24	25	49	12	18	30	14	13	27	74	91	165
St. Cloud [3]	7	13	20	3	10	13	1	4	5	7	13	20	18	40	58
St. Pet'burg [6]	87	130	217	73	134	207	51	81	132	30	55	85	241	400	641
Sanford [1]	39	35	74	21	42	63	7	19	26	9	16	25	76	112	188
Sarasota [1 6]	13	16	29	15	13	28	7	8	15	3	1	4	38	38	76
Seabreeze [1 6]	9	13	22	4	12	16	2	8	10	2	7	9	17	40	57
Sebring	8	10	18	1	7	8	2	8	10	6	2	8	17	27	44
Starke	9	10	19	8	5	13	1	3	4	4	6	10	22	24	46
Stuart	5	8	13	5	8	13	2	3	5	1	5	6	13	24	37
Tallahassee [1 6]	28	37	65	23	38	61	17	21	38	10	21	31	78	117	195
Tampa [1 6 7]	180	231	411	133	207	340	81	109	190	73	92	165	467	639	1106
Tarpon Spgs. [6]	9	17	26	14	13	27	8	10	18	4	4	8	35	44	79
Titusville [3]	5	17	22	4	6	10	7	3	10	3	9	12	19	35	54
Trenton	5	12	17	0	11	11	3	1	4	1	4	5	9	28	37
Umatilla	3	8	11	6	11	17	2	2	4	2	1	3	13	22	35
Vero	8	18	26	3	7	10	1	5	6	5	4	9	17	34	51

TABLE I—Continued

Enrollment in Florida High Schools
(4 Year High Schools)

Location of School	GRADES														
	9th			10th			11th			12th			Grand Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Waldo [1]	2	3	5	1	2	3	0	0	0	1	1	2	4	6	10
Wauchula [1] [6]	28	29	57	15	15	30	6	22	28	13	16	29	62	82	144
Webster [4]	15	16	31	4	5	9	4	1	5	2	1	3	25	23	48
W. Palm B'ch [6]	43	56	99	31	52	83	24	34	58	10	33	43	108	175	283
Williston [3]	5	6	11	7	7	14	1	7	8	0	6	6	13	26	39
Winter Haven [1]	20	25	45	20	24	44	22	19	41	9	27	36	71	95	166
Zephyrhills [3]	6	10	16	7	5	12	5	4	9	3	5	8	21	24	45
	2078	2713	4791	1365	2033	3398	884	1348	2232	657	1017	1674	4984	7111	12095

[1] On Senior List of State Department 1920-21.
[2] On Junior List of State Department 1920-21.
[3] On Intermediate List of State Department 1920-21.
[4] Statistics for 1916-17.
[5] Statistics for 1917-18.
[6] Member of Southern Association of Colleges and Secondary Schools 1920-21.
[7] These figures include 180 boys and 231 girls enrolled in the two Junior High Schools in the ninth grade.

TABLE II

Enrollment in Florida High Schools
(3 Year High Schools)

Location of School	GRADES											
	9th			10th			11th			Gr'd Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Clermont [1]	6	3	9	2	2	4	1	0	1	9	5	14
Floral City	2	5	7	0	4	4	0	2	2	2	11	13
Ft. White	16	3	19	5	5	10	1	6	7	22	14	36
Geneva	2	3	5	1	1	2	0	1	1	3	5	8
Greenwood	3	7	10	0	3	3	1	2	3	4	12	16
Groveland [1]	4	6	10	2	1	3	2	1	3	8	8	16
Havana [1]	6	13	19	6	13	19	3	2	5	15	28	43
Jupiter	5	2	7	0	0	0	2	0	2	7	2	9
Lake Wales [2]	7	4	11	8	1	9	0	10	10	15	15	30
Macclenny	2	6	8	3	2	5	0	2	2	5	10	15
Melrose	5	5	10	1	5	6	0	3	3	6	13	19
Micanopy	4	18	22	2	2	4	4	4	8	10	22	32
Newberry	8	10	16	1	5	6	0	1	1	9	16	25
Pinetta	1	4	5	1	5	6	0	3	3	2	12	14
White Springs	4	17	21	1	3	4	3	3	6	8	23	31
Winter Park	4	10	14	4	6	10	4	4	8	12	20	32
Grand Total	79	114	193	37	58	95	21	44	65	137	216	353

[1] On Junior List of State Department 1920-21.
[2] On Intermediate List of State Department 1920-21.

TABLE III

Enrollment in Florida High Schools
(2 Year High Schools)

Location of School	GRADES								
	9th			10th			Grand Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Altha [1]	6	13	19	0	6	6	6	19	25
Alva	4	8	12	3	2	5	7	10	17
Anthony	2	2	4	3	3	6	5	5	10
Archer	2	1	3	3	1	4	5	2	7
Baker	7	3	10	3	3	6	10	6	16
Bell	2	1	3	0	4	4	2	5	7
Branford	4	4	8	0	1	1	4	5	9
Brooker	2	2	4	0	6	6	2	8	10
Bunnell [2]	1	10	11	1	4	5	2	14	16
Campbellville	2	1	3	0	1	1	2	2	4
Carrabelle	1	3	4	3	0	3	4	3	7
Center Hill	0	2	2	2	5	7	2	7	9
Century	3	3	3	0	5	5	3	8	11
Chattahoochee	4	1	5	1	3	4	5	4	9
Citra	3	2	5	0	5	5	3	7	10
Cocoanut Grove [1]	6	6	12	1	6	7	7	12	19
Coleman	4	3	7	2	1	3	6	4	10
Concord [2]	2	7	9	0	3	3	2	10	12
Dania [1]	2	7	9	5	1	6	7	8	15
Elfers [2]	5	2	7	1	2	3	6	4	10
Enterprise [2]	3	4	7	3	3	6	6	7	13
Frostproof [1]	7	3	10	4	4	8	11	7	18
Greensboro [1]	2	4	6	5	11	16	7	15	22
Greenville	2	1	3	1	3	4	3	4	7
Gretna [1]	5	3	8	1	2	3	6	5	11
Haines City	2	4	6	1	3	4	3	7	10
Hastings	4	11	15	2	2	4	6	13	19
Hawthorne	1	2	3	4	5	9	5	7	12
Hilliard	2	1	3	2	0	2	4	1	5
Jennings [1]	4	7	11	1	4	5	5	11	16
Kathleen	3	5	8	2	4	6	5	9	14
Lake Worth	13	22	35	2	9	11	15	31	46
Larkins	2	2	4	5	4	9	7	6	13
Laurel Hill	5	2	7	0	5	5	5	7	12
Lawtey	3	6	9	0	2	2	3	8	11
Lecanto	0	2	2	0	3	3	0	5	5
McIntosh [1]	5	3	8	0	2	2	5	5	10
Millville [1]	13	9	22	6	4	10	19	13	32
Mt. Dora [1]	3	9	12	1	2	3	4	11	15
Oxford	6	10	16	2	0	2	8	10	18
Safety Harbor	4	8	12	2	3	5	6	11	17
Sebastian	1	3	4	3	1	4	4	4	8
Summerfield	3	3	6	1	3	4	4	6	10
Wildwood [1]	4	6	10	1	3	4	5	9	14
Zellwood	2	3	5	0	3	3	2	6	8
Grand Total	161	214	375	79	146	224	238	361	599

[1] On Junior List of State Department 1919-20.

[2] Statistics for year 1919-20.

TABLE IV

Enrollment in Florida High Schools
(1 Year High Schools)

Location of School	GRADES		
	9th Grade		
	Boys	Girls	Total
Aucilla	3	3	6
Belleview	1	2	3
Brewster	5	4	9
Bristol	3	2	5
Cedar Keys	5	2	7
Crystal River	1	0	1
Gardner	5	2	7
Hernando	1	2	3
Montbrook	1	0	1
Morriston	1	3	4
Ocoee	2	4	6
Reddick	1	2	3
St. Andrews	5	3	8
Sopchoppy	1	1	2
Wellborn	4	5	9
Grand Total	39	35	74

TABLE V

Total High School Enrollment Classified According to Kind of High Schools

Kind of School	No. of Schools	GRADES							
		9th	10th	11th	12th	Boys	Girls	Total	Percent of Total
1-Year	15	74				39	35	74	.5
2-Year	45	375	224			238	361	599	4.5
3-Year	16	193	95	65		137	216	353	2.7
4-Year	98	4791	3398	2232	1674	4984	7111	12095	92.3
Total	174	5433	3717	2297	1674	5398	7723	13121	
Percent		41.4	28.3	17.4	12.9	41.1	58.9		100

To say there are only 98 four-year high schools in all the state may seem disparaging, but the bright side of the picture is revealed when we realize that 92.3 per cent of all the pupils

are enrolled in these, while only 5 per cent are enrolled in the 60 one and two-year high schools.

It is unfortunate to realize that in Florida, as in every other state, nearly one-half (41.4 per cent) of all the high school pupils are in the 9th grade, and over two-thirds (69.7 per cent) are in the first two years of high school, whereas only 12.9 per cent are in the 12th grade.

Let us next see how many months in the year pupils attend high school. That is, how many months the high schools run in which the pupils are enrolled. Table VI gives the enrollment according to the length of term the schools run, while table VII classifies the high schools on the basis of the number of months run. Tables VI and VII follow.

TABLE VI

High School Enrollment Classified According to the Length of Term

Kind of School	No. of Schools	Average No. Pupils per School	NUMBER OF MONTHS						
			5-mo.	6-mo.	7-mo.	8-mo.	9-mo.	Total	Percent of Total
1-Year	15	5	.....	5	20	40	9	74	.5
2-Year	45	13	11	61	23	399	105	599	4.5
3-Year	16	22	.....	.....	30	323	.....	353	2.7
4-Year	98	123	.....	.....	.....	2607	9488	12095	92.3
Total	174	75	11	66	73	3369	9488	13121	
Percent	.....	.....	.1	.5	.6	25.7	73.1	.....	100

TABLE VII

High Schools Classified According to Length of Term

Kind of School	No. of Schools	Number of Months Run					Percent of Total
		5-mo.	6-mo.	7-mo.	8-mo.	9-mo.	
1-Year	15	.....	1	4	9	1	8.6
2-Year	45	1	4	3	32	5	25.9
3-Year	16	.....	.....	2	14	.....	9.1
4-Year	98	.....	.....	.....	45	53	56.4
Total	174	1	5	9	100	59	
Percent	.....	.6	3.	5.2	57.4	33.8	100

From table VII we see that only 33.8 per cent of all the high schools run nine months, yet table VI shows they enroll 73.1 per cent of all the pupils; and that while 57.4 per cent of all the schools run only eight months, yet they enroll only 25.7 per cent of all the pupils. These conditions reveal the fact that 92.3 per cent of all the pupils are enrolled in four-year high schools, which makes the situation exceedingly promising.

Table VIII is inserted at this point for the purpose of giving the reader a clearer conception of the development of the high school since inspection began. These data were taken from the Biennial Reports of the State High School Inspector. The exact classification of high schools is reproduced here which accounts for the seemingly confusing terminology in the classification.

TEACHING FORCE

Another way to get a good idea of the status of the high school is to consider the teaching force thereof. The old saying, "As is the teacher so is the school," applies as truly to the high school as to any part of the school system. Hence the purpose of the chapter is to ascertain the following facts concerning the teaching force of the Florida high schools: How many high school teachers are there in the state giving full time to the high school; where were these high school teachers trained; what per cent of these high school teachers is men, and what per cent is women; what per cent of the men and women teachers were new in their jobs last year; how long do the teachers work in one place? etc. The answers to these questions should give us a little keener insight into the status of our high schools.

Table IX which follows gives the total number of high school teachers classified according to sex and type of school; table X shows the number of teachers classified according to the size of the school they work in; and table XI shows the number of teachers classified according to the size of the high school as measured by the number of teachers in the high school faculty. The tables follow.

TABLE VIII

Total Enrollment in All Florida High Schools from 1907 to 1921

Year	Classes and Number of High Schools															Grades												Total
	3rd Class	2nd Class	1st Class	2-Year [2]	3-Year [3]	4-Year [4]	4-Year [5]	1-Year	2-Year [1]	2-Year	3-Year	Senior	Intermed.	Junior	Irregular	Total	9th		10th		11th		12th		Boys		Girls		
																	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1907-08	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	783	42.6	454	24.2	350	19.6	251	13.6	718	39.1	1120	60.9	1838
1908-09	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	917	42	559	25.6	389	17.8	319	14.6	880	40.3	1308	59.7	2184
1909-10	39	10	29	....	....	....	....	....	....	....	....	....	....	....	8	86	1420	46.8	824	27.2	446	14.7	341	11.3	1252	41.3	1779	58.7	3031
1910-11	....	....	....	....	....	....	....	....	6	15	9	29	....	....	14	73	1218	45.4	789	29.4	406	15.1	270	10.1	1057	39.4	1626	60.6	2683
1911-12	....	....	....	....	....	....	....	....	12	13	10	30	....	....	18	83	1650	47	971	27.7	544	15.5	343	9.8	1378	39.3	2130	60.7	3508
1912-13	....	....	....	....	....	....	....	....	....	25	8	32	....	....	17	82	1883	43.2	1254	28.7	769	17.6	458	16.5	1815	41.6	2549	58.4	4364
1913-14	....	....	....	....	....	....	....	....	....	23	11	39	....	....	14	87	2110	43	1363	28	846	18	552	11	1876	39	2995	61	4871
1914-15	....	....	....	22	12	12	51	....	....	....	....	....	....	....	....	97	1987	44	1152	26	737	16	613	14	1829	41	2660	59	4489
1915-16	....	....	....	23	16	11	55	....	....	....	....	....	....	....	....	105	2650	42.6	1663	26.8	1128	18.1	778	12.5	2743	44.1	3476	55.9	6219
1916-17	....	....	....	....	....	....	....	....	....	....	....	40	21	25	26	112	2670	43.3	1678	27	1042	16.8	823	13.2	2676	43.1	3537	56.9	6213
1917-18	....	....	....	....	....	....	....	....	....	....	....	48	21	16	18	103	2858	40.2	1989	28	1312	18.5	949	13.3	2847	40.1	4261	59.9	7108
1918-19	....	....	....	....	....	....	....	....	....	....	....	48	23	10	....	81	3126	40.2	2006	25.8	1439	18.5	1166	15.5	3030	40	4737	60	7767
1919-20	....	....	....	....	....	....	....	....	....	....	....	38	13	15	....	66	2678	40	1811	26.9	1212	18	1042	15.1	2723	40.5	4020	59.5	6743
1920-21 [6]	....	....	....	....	16	....	98	15	....	45	....	....	....	2 [7]	....	176	5433	41.4	3717	28.3	2297	17.5	1674	12.8	5398	41.1	7723	58.9	13121

[1] Principal teaches 8th, 9th and 10th grades.
[2] With at least one teacher's whole time.
[3] Regardless of the number of teachers.
[4] With less than three teachers.
[5] With three or more teachers.
[6] See discussion in Bulletin for explanation of groups in this year.
[7] This refers to the modern use of the term in case of these two schools.

TABLE IX

Showing the Number and Percentage of Teachers in the Various Kinds of High Schools

Kind of School	No. of Schools	NO. TEACHERS			
		Men	Women	Total	
				No.	%
1-Year	15	8	7	15	2.3
2-Year	45	38	14	52	8.1
3-Year	16	18	10	28	4.4
4-Year	98	166	380	546	85.2
Total	174	230	411	641	
Percent of Total		35.9	64.1		100

TABLE X

High Schools Classified According to Number of Teachers Employed

Kind of School	No. of Schools	NUMBER TEACHERS									
		One-Teacher	Two-Teacher	Three-Teacher	Four-Teacher	Five-Teacher	Six-Teacher	Seven-Teacher	Eight-Teacher	Nine-Teacher	Over 9 Teachers
1-Year	15	15									
2-Year	45	38	7								
3-Year	16	7	7	1	1						
4-Year	98	3	13	14	23	15	8	8	5	2	7
Total	174	63	27	15	24	15	8	8	5	2	7
Percent		36.2	15.5	8.6	13.8	8.6	4.6	4.6	2.9	1.2	4

TABLE XI

Showing the Distribution of Teachers Classified According to the Size of the High School as Measured by the Number of Teachers in the High School Faculty

Kind of School	No. of Schools	NUMBER OF TEACHERS									
		One-Teacher	Two-Teacher	Three-Teacher	Four-Teacher	Five-Teacher	Six-Teacher	Seven-Teacher	Eight-Teacher	Nine-Teacher	Over 9 Teachers
1-Year	15	15									
2-Year	45	38	14								
3-Year	16	7	14	3	4						
4-Year	98	3	26	42	92	75	48	56	40	18	146
Total	174	63	54	45	96	75	48	56	40	18	146
Percent		9.8	8.4	7.1	14.9	11.7	7.5	8.8	6.2	2.8	22.8

There are several interesting facts contained in tables IX to XI. For the sake of brevity, a few of the chief ones can be stated as follows:

85.2 per cent of all high school teachers work in four-year high schools, while only 14.8 per cent are employed in one, two, and three-year high schools.

35.9 per cent of all high school teachers are men and 64.1 per cent are women.

36.2 per cent of all high schools are one-teacher high schools.

15.5 per cent of all high schools are two-teacher high schools.

Over one-half (51.7 per cent) of all high schools of the state are one and two-teacher high schools.

Practically three-fourths (74.1 per cent) of all the high schools of the state are four-teacher high schools or less.

While 36.2 per cent of all the high schools are one-teacher high schools, they employ only 9.8 per cent of all the teachers.

While 51.7 per cent of all the high schools are one and two-teacher high schools, they only employ 18.2 per cent of all the teachers.

While 74.1 per cent of all the high schools are four-teacher high schools or less, they only employ 40.2 per cent of all the teachers.

Practically one-fourth (22.8 per cent) of all the teachers work in high schools with over nine teachers in the faculty.

Another important question in this connection is: Where were these high school teachers trained? It was practically impossible to obtain these data for every teacher in the state, consequently the writer took the 36 high schools which are members of the Southern Association of Colleges and Secondary Schools as a basis. He had the data for these schools already in hand, as it is called for in the Southern Commission blank which each high school principal fills. Although the following table covers only the 36 best and largest high schools in the state, yet the writer feels that it fairly well represents the state-wide situation. Table XII which gives these data is followed by table XIII which is merely a summary of table XII. With this explanation the tables follow.

TABLE XII

Table Showing the Higher Institutions in Which the Principals and Teachers Were Trained Who Work in the Thirty-six Florida High Schools Which Are Members of the Southern Association of Colleges and Secondary Schools.[1]

Name of School	State or Country	Teachers Holding a Bachelor's Degree or More			Teachers Not Holding a Bachelor's Degree			Grand Total
		Men	Women	Total	Men	Women	Total	
Agnes-Scott College	Ga.	0	4	4				4
Alabama Polytechnic	Ala.	0	1	1				1
Alabama, University of	Ala.	1	0	1				1
Alma College	Mich.	0	1	1				1
Andrew College	Ga.	0	1	1				1
Arkansas, University of	Ark.	0	2	2				2
Athens College	Ga.	0	1	1				1
Austin College	Texas	1	0	1				1
Baker College	Kan.	0	1	1				1
Beloit College	Wis.	0	2	2				2
Berea College	Ky.	0	1	1				1
Bowling Green Bus. Univ.	Ky.	1	1	2	0	1	1	3
Brenau College	Ga.	0	2	2				2
Burritt College	Tenn.	1	0	1				1
Carson-Newman College	Va.	3	1	4				4
Chicago, University of	Ill.	2	3	5	0	1	1	6
Citadel College	S. C.	1	0	1				1
Colorado St. Teach's Coll.	Colo.	1	0	1				1
Columbia College	Fla.	1	1	2	0	4	4	6
Columbia, University of	N. Y.	0	2	2				2
Converse College	S. C.	1	0	1				1
Cornell University	N. Y.	1	1	2				2
Culver Stockton College	Mo.	0	1	1				1
Cumberland University	Tenn.	0	1	1				1
DePauw University	Ind.	0	2	2				2
Dartmouth College	N. H.	1	0	1				1
Davis-Elkin College	W. Va.	0	1	1				1
Earlham College	Ind.	1	0	1				1
Elizabeth College	Va.	0	1	1				1
Emory University	Ga.	3	0	3				3
Ecuador, University of	Ecuador				0	1	1	1
Florida St. Coll. for Women	Fla.	0	50	50	0	2	2	52
Florida State Normal	Fla.				0	1	1	1
Florida, University of	Fla.	14	0	14	3	3	6	20
France (some institution)	France	2	2	4	1	2	3	7
Franklin College	Ind.	1	0	1				1
Furman University	S. C.	1	2	3				3
George Washington Univ.	D. C.	0	0	0	0	1	1	1
Georgia N. and Ind. Coll.	Ga.	0	1	1	0	2	2	3
Georgia, University of	Ga.				0	1	1	1
Goshen College	Ind.	0	1	1				1
Goucher College	Md.	0	2	2				2
Grinnell College	Ia.	0	2	2				2

TABLE XII—Continued

Name of School	State or Country	Teachers Holding a Bachelor's Degree or More			Teachers Not Holding a Bachelor's Degree			Grand Total
		Men	Women	Total	Men	Women	Total	
Gym. City Bus. Coll.	Ill.	.....	.....	.....	0	1	1	1
Hamilton College	Ky.	.....	.....	.....	0	1	1	1
Harvard University	Mass.	1	0	1	.....	.....	.....	1
Hampden-Sidney College	Va.	3	0	3	.....	.....	.....	3
Hillsdale College	Mich.	1	0	1	.....	.....	.....	1
Howard College	Ala.	.....	.....	.....	0	1	1	1
Illinois, University of	Ill.	0	8	8	0	0	0	8
Indiana State Normal	Ind.	4	1	5	0	0	0	5
Indiana, University of	Ind.	0	1	1	.....	.....	.....	1
Iowa State Normal	Ia.	.....	.....	.....	0	1	1	1
Kalamazoo College	Mich.	.....	.....	.....	0	1	1	1
Kansas A. & M. College	Kan.	0	1	1	.....	.....	.....	1
Kansas State Normal	Kan.	0	1	1	1	0	1	2
Kansas, University of	Kan.	0	1	1	.....	.....	.....	1
Kentucky, University of	Ky.	0	3	3	.....	.....	.....	3
Knox College	Ill.	0	1	1	.....	.....	.....	1
Leland Stanford University	Cal.	1	1	2	0	1	1	3
Liberty College	Ky.	0	1	1	.....	.....	.....	1
Lima College	Ohio	1	0	1	.....	.....	.....	1
Louisiana, University of	La.	1	1	2	.....	.....	.....	2
Mars Hill College	N. C.	.....	.....	.....	1	0	1	1
Martha Washington Coll.	Miss.	0	1	1	.....	.....	.....	1
Marquette College	Wash.	1	2	3	.....	.....	.....	3
Marvin College	Ky.	0	1	1	.....	.....	.....	1
Meridian College	Miss.	2	0	2	.....	.....	.....	2
Michigan State Normal	Mich.	.....	.....	.....	1	0	1	1
Michigan, University of	Mich.	0	1	1	.....	.....	.....	1
Minnesota, University of	Minn.	1	1	2	.....	.....	.....	2
Mississippi A. & M. Coll.	Miss.	1	0	1	.....	.....	.....	1
Miss., University of	Miss.	1	1	2	.....	.....	.....	2
Miss. State Normal	Miss.	.....	.....	.....	0	1	1	1
Missouri St. Teach's Coll.	Mo.	1	1	2	.....	.....	.....	2
Missouri, University of	Mo.	0	1	1	.....	.....	.....	1
North Carolina, Univ. of	N. C.	2	0	2	0	1	1	3
North Dak. A. & M. Coll.	N. Dak.	1	0	1	.....	.....	.....	1
New Hampshire College	N. H.	.....	.....	.....	1	0	1	1
Oberlin College	Ohio	0	1	1	.....	.....	.....	1
Ohio, University of	Ohio	1	2	3	1	0	1	4
Oklahoma A. & M. College	Okla.	0	1	1	.....	.....	.....	1
Oxford College	Ohio	1	0	1	.....	.....	.....	1
Palmer College	Fla.	.....	.....	.....	0	1	1	1
Peabody Coll. for Teachers	Tenn.	2	3	5	0	2	2	7
Pennsylvania A. & M. Coll.	Penn.	1	0	1	.....	.....	.....	1
Pennsylvania, Univ. of	Penn.	0	1	1	.....	.....	.....	1
Piedmont College	Ga.	0	1	1	0	1	1	2
Phillips University	Okla.	0	1	1	.....	.....	.....	1
Princeton University	N. J.	1	0	1	.....	.....	.....	1
Randolph-Macon Coll. (men)	Va.	2	0	2	.....	.....	.....	2

TABLE XII—Continued

Name of School	State or Country	Teachers Holding a Bachelor's Degree or More			Teachers Not Holding a Bachelor's Degree			Grand Total
		Men	Women	Total	Men	Women	Total	
Randolph-Mac. Coll. (wom.)	Va.	0	6	6				6
Reynolds College	Texas				1	0	1	1
Richmond College	Va.	0	1	1				1
Rollins College	Fla.	1	2	3	0	1	1	4
Royal Naval College	England	1	0	1	0	0	0	1
San Antonio College	Texas				0	1	1	1
Scarrett College	Mo.	0	1	1				1
Smith College	Mass.	0	1	1				1
Shorter College	Ga.	1	0	1				1
Southern College	Fla.	1	1	2	1	0	1	3
South'n Methodist Univ.	Texas	0	1	1	0	1	1	2
Southern Normal School	Ky.	2	0	2	0	0	0	2
South Dakota, Univ. of	S. Dak.	0	1	1				1
South Carolina, Univ. of	S. C.	1	0	1				1
Stetson University	Fla.	3	11	14	0	1	1	15
Stout Institute	Wis.				1	1	2	2
Swarthmore College	Pa.	1	2	3				3
Syracuse University	N. Y.	0	1	1				1
Tennessee, University of	Tenn.				0	1	1	1
Valparaiso University	Ind.	2	0	2	1	0	1	3
Virginia, University of	Va.	0	1	1				1
Virginia Military Institute	Va.	1	0	1				1
Wake Forrest College	N. C.	1	0	1				1
Wentworth Academy	Mass.	1	0	1				1
Wentworth Institute	Mass.				1	0	1	1
Wesleyan College	Ga.	0	5	5	0	1	1	6
West Va., University of	W. Va.	2	1	3				3
Western College	Ohio	0	1	1				1
Westminster College	Pa.	0	1	1				1
William Jewell College	Mo.	1	0	1				1
Williams College	Mass.				1	0	1	1
Winthrop N. and Ind. Coll.	S. C.	0	2	2	0	1	1	3
Wisconsin, University of	Wis.	2	2	4				4
Wittenburg College	Ohio	1	0	1				1
Wooster College	Ohio	1	0	1				1
None or not given					0	6	6	6
TOTAL		91	171	262	14	51	65	327
Percent of Total		28	52	80	4.3	15.7	20	100

[1] Not all the institutions listed above are recognized as standard by the Southern Association of Colleges and Secondary Schools.

TABLE XIII

Table Showing **Summary by States** Where the Principals and Teachers Were Trained Who Work in the Thirty-six Florida High Schools Which Are Members of the Southern Association of Colleges and Secondary Schools.[1]

States in Which Higher Institutions Are Located	Teachers Holding a Bachelor's Degree or More	Teachers Not Holding a Bachelor's Degree	Grand Total
Florida	85	17	102
Georgia	19	5	24
Virginia	19	0	19
Illinois	14	2	16
Indiana	13	1	14
Kentucky	10	2	12
Ohio	9	1	10
Tennessee	7	3	10
South Carolina	8	1	9
Wisconsin	6	2	8
Mississippi	6	1	7
Missouri	6	0	6
Pennsylvania	6	0	6
Kansas	4	1	5
North Carolina	3	2	5
New York	5	0	5
Michigan	3	2	5
Texas	2	3	5
Massachusetts	4	1	5
West Virginia	4	0	4
Washington	3	0	3
Iowa	2	1	3
California	2	1	3
Alabama	2	1	3
Louisiana	2	0	2
Minnesota	2	0	2
Maryland	2	0	2
Oklahoma	2	0	2
Arkansas	2	0	2
New Hampshire	1	1	2
Colorado	1	0	1
New Jersey	1	0	1
North Dakota	1	0	1
South Dakota	1	0	1
District of Columbia	0	1	1
Ecuador	0	1	1
England	1	0	1
France	4	3	7
Not given	0	12	12
Total	262	65	327
Percent of Total	80	20	100

[1] Palmer College and Florida Military Academy are considered here since they are both members of the Southern Association of Colleges and Secondary Schools.

The outstanding facts of tables XII and XIII are:

There are teachers from 126 higher institutions of learning out of the state. These institutions represent 34 states, the District of Columbia and 3 foreign nations.

Only 31.1 per cent of all the high school teachers in these schools were trained in any kind of higher institution of learning in the State of Florida.

80 per cent of all the teachers are college graduates.

The 68.9 per cent of teachers in these 36 high schools trained outside of Florida, do not represent any one state or higher institution of learning, but come from a large number of institutions scattered over a wide range of territory.

Still another interesting question in this connection is: How long have the teachers in these high schools worked in their present positions? Two tables dealing with the question are presented here. Table XIV which includes all the high school teachers of the state, shows only the number and per cent of teachers that are serving their first year in their positions. Table XV which included all the teachers for the 36 Southern Association high schools, shows the number of years each teacher has been in his or her present position. Tables XIV and XV follow.

TABLE XIV

Showing Number and Percent of High School Teachers New in System

Kind of School	No. of Schools	No. of Teachers	NEW TEACHERS IN SYSTEM					
			Men		Women		Total	
			No.	%	No.	%	No.	%
1-Year	15	15	3	37.5	.....	.....	3	20
2-Year	45	52	24	63.1	14	100	38	73.1
3-Year	16	28	6	33.3	5	50	11	40
4-Year	98	546	82	49.4	193	50.8	275	50.4
Total	174	641	115	50	212	51.6	327	51

TABLE XV

Showing the Tenure of the Principals and Teachers in the Thirty-six High Schools Which Are Members of the Southern Association of Colleges and Secondary Schools.[1]

Years in Present High School	PRINCIPALS (All Men)	TEACHERS							
		Teachers Trained in Higher Institutions in Florida			Teachers NOT Trained in Higher Institutions in Florida			Total	Per Cent
		Men	Women	Total	Men	Women	Total		
First	11	10	35	45	22	72	94	150	46
Second	7	3	13	16	15	24	39	62	19
Third	6	4	12	16	8	17	25	47	14.4
Fourth	5	.....	3	3	2	5	7	15	4.6
Fifth	.....	.....	6	6	1	6	7	13	4.1
Sixth	.....	.....	4	4	.....	5	5	9	2.7
Seventh	1	.....	1	1	.....	2	2	4	1.2
Eighth	2	.....	1	1	1	2	3	6	1.8
Ninth	1	.....	.....	.....	1	2	3	4	1.2
Tenth	1	.....	1	1	.....	3	3	5	1.4
Eleventh	.....	.....	1	1	2	3	5	6	1.8
Twelfth	1	.....	.....	.....	.....	.....	.....	1	.3
Thirteenth	1	.....	.....	.....	.....	1	1	2	.6
Fifteenth	.....	.....	.....	.....	.....	1	1	1	.3
Sixteenth	.....	.....	.....	.....	.....	1	1	1	.3
Twenty-second	.....	.....	1	1	.....	.....	.....	1	.3
Total	36	17	78	95	52	144	196	327	
Percent	.....	31.1 [2]			68.9			.....	100

[1] Palmer College and Florida Military Academy are considered here since they are both members of the Southern Association of Colleges and Secondary Schools.

[2] This percentage is arrived at by adding to the 95 teachers 7 principals who were trained in higher institutions of learning in Florida.

From a study of these tables we see that:

50 per cent of the men teachers and 51.6 per cent of the women teachers, or a total of 51 per cent of all the teachers, are new in their positions.

46 per cent of all the teachers and principals in these 36 high schools are new in their positions.

Practically two-thirds (65 per cent) of all the teachers in these 36 high schools are new or are serving their second year.

Practically four-fifths (79.4 per cent) of all the teachers and principals in these 36 high schools have served only two years or less in their positions.

Numerous problems connected with a state school system arise from a situation like this. Space will permit of the discussion of only a few of them. In the first place, it is almost impossible to organize a system under such conditions. Scarcely is the machinery of organization set up before the term is over and it is all to be done over again. In fact it is extremely difficult to get anywhere when more than two-thirds of all the high school teachers are trained outside the state, and when over half of the entire teaching force are new each year in their positions. Close organization, team-work, continuity of purpose and effort, and the like, can scarcely flourish in such an atmosphere.

Two elements enter into this situation. One is the "tourist teacher" who "winters" in Florida. On the salary which the high school teacher receives, she can pay her railroad fare each way, afford comfortable living quarters, and have enough left to "see Florida" at odd times and during the holidays. For such people it is merely a lark and a winter's outing on the great playgrounds of the South. Of course this is not true of all the teachers coming into the state. Many of them settle down to continuous years of faithful service, but it is true of too large a per cent.

A second element which aggravates this situation is the great moving, restless spirit prevailing among the permanent high school teachers of the state. That there is too much of this among our permanent teachers is self evident and needs no comment here.

The fact that over two-thirds (68.9 per cent) of all the high school teachers must be secured from outside the state, intensifies the seriousness of our certification problem. The law providing for the transfer of standard certificates from other states should go a long ways, however, towards alleviating this problem. Personally, the writer feels we should proceed on two fundamental bases of operation. The first is we should strive to get certification of teachers pitched on the basis of training received in standard, recognized normal schools, colleges and universities. The quicker we shift to that basis from the present "flying squadron" and "court-house examination" basis, the sooner will we get better teaching service. This is no reflection on the personnel of the "flying squadron" but it is an attack upon the present method of cer-

tification of teachers. The emphasis is upon the examinations rather than the training received in normal schools, colleges and universities.

In the second place, the writer feels that we cannot be too careful about the health certification of incoming teachers. Too great precaution can scarcely be taken to shield the children of the state from the persons who come to Florida on account of their health. Rigid physical examinations, accompanied by health certificates from home physicians, should be required of all applicants seeking teaching positions.

However, when all is said, the future is promising when we recall that 80 per cent of all the teachers in the best high schools are college graduates; that 35.9 per cent are men; that 92.3 per cent of the pupils and 85.2 per cent of the teachers are in four-year high schools; and that 73.1 per cent of all the high school pupils in the state are in high schools running nine months.

COURSE OF STUDY

In order to show definitely what units each high school is offering, tables XVI, XVII, XVIII, and XIX have been prepared. There is a table for each of the four kinds of high schools. Table XX follows these, and is a summary of some of the chief points of the preceding four.

Thinking it would aid some in getting the situation clear, the number of teachers in each school, the number of pupils in each school, and the total number of units offered by each school are included. All the units offered are grouped arbitrarily under the eight headings found in these five tables. The purpose of these, too, is merely to aid the reader in getting at conditions. Tables XVI to XX are included.

If we try to summarize conditions in general which cover all the four kinds of high schools, we can say that:

> English and Algebra are the only subjects which are offered by every high school. The only exception being the one-year school, which devotes a year to Plane Geometry instead of Algebra.
>
> If we rank the fifteen leading subjects of the curriculum in the order of their importance as measured by their finding a place in the course of study, we have:

English	offered	by	100	%	of	the schools
Algebra	"	"	99.4%	"	"	"
Ancient History	"	"	89.1%	"	"	"
Latin	"	"	85.6%	"	"	"
Med. & Mod. Hist.	"	"	75.6%	"	"	"
Plane Geometry	"	"	66.6%	"	"	"
Am. Hist. & Civics	"	"	65.5%	"	"	"
General Science	"	"	51.2%	"	"	"
Botany	"	"	50 %	"	"	"
Zoology	"	"	48.7%	"	"	"
Trigonometry	"	"	42.1%	"	"	"
Phys. Geography	"	"	42 %	"	"	"
Physics	"	"	42 %	"	"	"
Solid Geometry	"	"	36.8%	"	"	"
English History	"	"	33.3%	"	"	"

With a few exceptions, modern languages, vocational studies and avocational studies, find no place in the course of study for the one, two and three-year high schools;

The more modern phases of the social sciences, Sociology and Economics, are just beginning to find a place in a few of our stronger high schools;

Health or Hygiene receives practically no attention as a formal study in the high school curriculum.

Agricultural work, other than that done by the Smith-Hughes schools, is practically nil.

The above summary has to do with the spirit of our high schools, as registered by the units offered. Another way to size up the situation is to strike at it from a different angle by seeing how many high school pupils there are in the state taking each course. It is one thing to say that the high schools are offering such and such subjects, but it is quite another to know exactly how many pupils are taking each of these subjects.

The writer felt that it would be rather difficult to get these data, since it would entail a good deal of work on the part of the principals. He secured, however, these data for 63 of these 98 four-year high schools for the scholastic year 1919-20, through the kindness of Professor W. S. Cawthon, State High School Inspector, who had gathered it for his Biennial Report. Economy in printing, however, necessitated its omission. Space here will only permit the giving of the totals. Table XXI below contains these data on registrants in various subjects.

TABLE XVI
4-Year High School Curriculum

Location of School	No. Teachers: Men	No. Teachers: Women	No. Teachers: Total	No. Pupils: Boys	No. Pupils: Girls	No. Pupils: Total	Total No. of Units	English	Latin	French	Spanish	Arithmetic	Algebra	Plane Geom.	Solid Geom.	Trigonometry	Ancient Hist.	Mid. Mod. Hist.	English Hist.	Am. Hist.—Civics	Sociology	Economics	Phys Geog.	Gen. Science	Physiology	Botany	Zoology	Physics	Chemistry	Com Law	Bookkeeping	Shorthand	Typewriting	Man. Tr.	Mch. Draw'g	Cooking	Sewing	Agriculture	Music	Drawing	Arithmetic	Reviews	Psychology
Alachua	1	3	4	39	60	99	16	4	2				2	1		½	1	1	1	1			½	½																	½		1
Apopka	2	2	4	13	16	29	12	4	1				1	1	½		1	1		1																					½		1
Apalachicola	3	0	3	14	32	46	15½	4	2			½	2	1			1		1	1			1	1		½	½																
Arcadia	1	5	6	55	99	154	22½	4	4			½	2	1		½	1	1	1	1			1			½	½		1					1		1	1						½
Avon Park	1	2	3	15	29	44	17½	4	4				2	1			1	1		1	½			1		½	½																1
Barberville	2	1	3	16	21	37	20	4	4				2	1		½	1	1	1	1			½	1		½	½	1	1														
Bartow	1	7	8	73	106	179	23½	4	4		2		2	1	½	½	1	1	1	1	1		½	½		½	½		1												½		1
Bonifay	2	2	4	19	35	54	18	4	3				1	1			1	1		1				1				1		½	½							3					
Bowling Green	1	2	3	13	28	41	17	4	4			½	2	1		½	1	1		1								1															1
Bradentown	3	6	9	88	121	209	21	4	4	1			2	1	½	½	1	1		1		½		1		½	½	1	1														½
Brooksville	1	1	2	44	29	73	20	4	2		2		2	1				1	1	1	½		1			½	½		1										1		½		1
Bushnell	1	1	2	9	17	26	15	4	2				2	1	½	½	1	1		1			1			½	½																
Chipley	1	3	4	47	57	104	14½	4	2			½	2	1	½	½	1	1		1								1															
Clearwater	3	6	9	71	102	173	28	4	4	1			2	1	½	½	1	1	1	1				1		½	½	1			1	1	1	2	1	1	1						
Cocoa	1	3	4	22	37	59	19	4	4				2	1	½	½		1	1	1				1		½	½	1								½	½						
Crescent City	1	1	2	13	16	29	19	4	2		2		2	1	½	....	1	1	½	1				1		½	½	½											1		½		
Dade City	1	2	3	30	61	91	20	4	4				2	1	½	½	1	1	1	1				1		½	½		1												1		
Daytona	1	7	8	61	98	159	27	4	2	2	2		2	1	½	½	1	1	1	1			1			½	½	1	1					1	1	1	1		1				
DeFuniak Springs	1	4	5	60	75	135	20	4	2				2	1	½	½	1	1	1	1				1		½	½	1	1							1	1						
DeLand	1	5	6	55	95	150	23½	4	4	2			2	1	½	½	1	1		1			½	½		½	½	1	1					½	½	½	½			½			
Delray	1	3	4	17	25	40	17	4	2				2	1			1	1	1	1								1				½	½			½	½						1
Dunnellon	2	2	4	17	25	42	17	4	2	1			2	1		....	1	1	1	1			1			½	½	1															
Eau Gallie	2	0	2	11	7	18	14½	4	2		1		1½	1		½	1			1			1	½							1												
Eustis	1	3	4	33	30	63	20	4	3	1		½	2	1	½		1	1	1	1			1	1		½	½	1															
Fellsmere	0	2	2	5	8	13	14	4	1			1	2	1	½	½	1	1		1								1															
Fernandina	1	1	2	5	23	28	14	4	4				2	1		½		1		1				½																			
Ft. Lauderdale	2	5	7	60	70	130	20½	4	4	1	1		2	1		½	1	1	1	1			1	1					1														
Ft. Meade	1	6	7	45	72	117	25	4	2		2		2	1	½	½	1	1		1			1	1	1	½	½	1	1		1		1					2					
Ft. Myers	1	4	5	64	73	137	20½	4	3		2		2	1			1	1		1		½	1			½	½		1					1		½	½						
Ft. Pierce	3	4	7	35	68	103	29	4	1	2			2	1	½	½	1	1	1	1				1		½	½	1	1	1	1	1	1			1	1						1
Gainesville	2	6	8	103	133	236	23	4	4	2	2		2	1	½	½	1	1		1						½	½	1	1									1					
Gonzalez	1	3	4	21	18	39	15	4	1				2		....		1			1			1	1					1					½		½	½	1½					
Graceville	2	1	3	26	22	48	16	4	2	1			2	1	½	½	1	1	1	1								1															
Green Cove Springs	1	1	2	7	20	27	13	4	2				2		½		1	1		1								1															½
High Springs	1	3	4	15	21	36	19	4	1				2			½	1	1	1	1			½	½		½	½	1			1		½										
Homestead	1	3	4	23	30	53	22½	4	3		1		2	1	½	½	1	1	1	1	½			1		½	½	1						¼		½	½			¼	1		½
Inverness	1	1	2	19	26	45	19½	4	4				2	1	½	½	1	1		1			1	½		½	½	1								½	½						
Jacksonville	10	25	35	476	591	1067	43	4	4	3	2		2	1	½	½	1	1	1	1		½	1			½	½	1	1	½	2	2	2	3	2	2	2					1	1
Jasper	1	2	3	17	21	39	19	4	4				2	1	½	½	1	1	1	1			1			½	½	1															
Key West	2	5	7	52	77	129	18½	4	2		2		2	1	½	½	1	1		1	½		1	1		½	½																
Kissimmee	1	4	5	34	75	109	26	4	4	2			2	1	½	½	1	1	1	1				1		½	½	1	1							2	2						
LaBelle	2	2	4	14	20	34	19	4	3	1		½	1½	1		½	1	1		1				1	½	½	½	1						½	½	½	½						
Lake Butler	1	3	4	10	23	33	18½	4	4				2	1	½	½	1	1	1	1			½	½		½	½						½										
Lake City	2	5	7	64	60	124	22	4	3	1			2	1	½	½	1	1	1	1				1		½	½	1	1		1	½	½										
Lakeland	2	9	11	133	185	318	25½	4	4	1			1½	1	½	½	1	1	1	1			1	1		½	½	1	1		1	1	1			½	½						
Largo	3	2	5	20	53	73	19	4	3				2	1			1			1½														1		1	2	1½					1
Leesburg	1	5	6	47	41	88	21	4	3	2			2	1	½	½	1	1		1½				1				1	1	½						½	½						
Lemon City	3	2	5	27	29	56	19½	4	2	1	2		2	1	½	½	1			1						½	½	1						¼		½	½	1½					
Live Oak	1	4	5	37	53	90	24	4	4				2	1	½	½	1	1	1	1			1			½	½	1	1							2	2						
Lynn Haven	0	2	2	4	11	15	13	4	4				1	1				1		1						½	½	1															
Madison	3	3	6	39	44	83	31½	4	4	2			2	1	½	½	1	1	1	1			1	1		½	½	1	1		½	½	½					2	1		1	1	1
Marianna	1	4	5	17	54	71	19	4	2	2			2	1	½	½	1	1		1			1	1		½	½	1															
Mayo	2	3	5	16	20	36	20	4	4				2	1	½	½	1	1	1	1				1		½	½	1	1														
Melbourne	2	3	5	30	46	76	21½	4	4		3		2	1			1	1	1	1			1			½	½	1							½	½	½						
Miami	6	20	26	321	408	729	39½	4	4	2	2		2	1	½	½	1	1	1	1				1		½	½	1	1		2	1	½	2	2	4	4						
Milton	1	3	4	45	58	103	28½	4		2	2		2	1	½	½	1	1	1	1	½		1	1	½	½	½	1	1		1	1	½						1				1
Monticello	0	4	4	13	33	46	18	4	3	1	1		2	1	½	½	1	1		1				1					1														
Montverde Indus.	3	1	4	46	59	105	19½	4	2	2			2	1	½			1		1				1	1									1		1	1	2					
Mulberry	1	4	5	28	45	73	22½	4	2		2		2	1		½	1	1	1	1				1		½	½		1							2	2						
Muskogee	0	2	2	12	9	21	21	4	4				2	1		½	1	1	1	1			1	1		½	½	1	1										½				
New Smyrna	1	4	5	43	47	90	23	4	2	2			2	1	½	½	1	1		1				1		½	½		1		1			1	1	½	½		2				
Oakland Winter Garden	1	0	1	10	26	36	19	4	4		2		2	1	½	½	1			1				1		½	½	1															
Ocala	1	5	6	70	104	174	23	4	2	2	1		2	1	½	½	1	1	1	1				1		½	½	1			1								1				
Okeechobee	1	2	[illegible]	17	20	37	20½	4	4				2	1		½	1	1	1	1			1			½	½	1										1					1
Orlando	2	11	13	152	195	347	26	4	4	2			2	1	½	½	1	1		1			½	½	1			1	1	½	1	1	1				1		1½				
Oviedo	0	1	1	4	9	13	10	4	2	1			2				1			1																							
Palatka	1	5	6	42	71	113	21	4	2	2	1	1	2	1	½	½	1	1		1				1		½	½	1	1							1	1				½		½
Palmetto	1	4	5	36	85	121	21	4	3	2			2	1	½		1	1		1		½		1		½	½	1	1												½		½
Panama City	[illegible]	4	[illegible]	28	34	62	17	4	2		2		2				1		1	1	½			1					1														½
Pensacola	3	13	16	162	265	427	27½	4	4	2	2		2	1	½	½	1	1	1	1				1		½	½	1	1		1	1	½			½	½						
Perry	1	3	4	58	16	74	16½	4	1				2	1			1	1		1½			1						1														1
Plant City	1	4	5	85	118	203	30	4	4		2		2	1	½	½	1	1		1				1		½	½	1	1					2	½	2	2	1½			½		½
Punta Gorda	2	1	3	31	31	62	17½	4	1				2	1		½	1	1		1			1			½	½	1								1	2						
Quincy	1	1	[illegible]	43	64	107	22	4					2	1	½	½	1	1	1	1				1		½	½	1								½	½						
Redlands	1	2	3	14	19	33	19	4	2		2		2	1	½	½	1	1		½	½			1		½	½							½			½						1
Sanford	2	5	7	76	112	188	23	4	2	2			2	1	½	½	1	1		1				1		½	½	1	1			½	½										1
Sarasota	2	2	4	38	38	76	20	4	2	2			2	1	½	½	1	1	1	1				1		½	½	1	1														
Seabreeze	2	2	4	17	40	57	20	4	2	2		1½	2	1	½		1	1		1	½		1						1							1	1		1				
Sebring	2	1	3	17	27	44	14	4	2	1			2	1	½	½	1			1				1																			
St. Augustine	1	6	7	71	91	162	20	4	1				2	1	½	½	1	1	1	1			1			½	½	1	1														
St. Cloud	1	2	3	18	40	58	15	4	1				1	1	½	½	1	1		1			1			½	½		1														
St. Petersburg	7	14	21	241	400	641	29	4	1	1	2		2	1	½	½	1	1	1	1			1			½	½	1	1		½	½	½	1		1	1		½				
Starke	1	3	4	22	24	46	18	4	2				2	1	½	½	1	1	1	1			½	½		½	½	1	1														
Stuart	0	4	4	13	24	37	16	4	3	2			2	1		½	1		1	1					½																½		
Tallahassee	2	5	7	78	117	195	24	4	4	2			2	1	½	½	1	1		1½	½			1		½	½	1	1							1	1						
Tampa	5	19	24	467	639	1106	27½	4	3	2			1	1	½	½	1	1		1			½			1	1									1	1		2		1	1	2
Tarpon Springs	[illegible]	[illegible]	[illegible]	37	41	78	19	4	2			1½		1	½		1			1				1	½	½		1						1	1	1	1				½		
Titusville	1	1	2	19	35	54	18	4	2				2	1	½	½	1	1	1	1			½	½		½	½	1															1
Trenton	1	2	3	9	28	37	15	4	2	1			2				1	1			1							1		½	½		½					1½					
Umatilla	2	1	3	13	22	35	16	3	3				2	1			1	1		1			1	1		½	½	1															
Vero	1	1	2	17	34	51	13	4	2		1	½	2				1	1													½												1
Waldo	1	0	1	4	6	10	17	4	4	1			2	1	½	½	1	1		1			1					1															
Wauchula	1	5	6	42	82	124	24	4	4				2	1	½	½	1	1	1	1			1			½	½	1						1		½	½	2					1
Webster	1	0	1	25	23	48	17	4	1	1			2	1		1	1	1		1			1					1															
West Palm Beach	2	6	8	108	175	283	34½	4	3	3		1½	2	1		½	1	1		1			1	½		½	½		1	½	2	2	2	2	2	2	2		½				
Williston	1	3	4	13	26	39	16	4	1				2	1					1	1			1	1		½	½	1								1	1						
Winter Haven	2	6	8	71	95	166	23½	4	2	2			2	1	½	½	1	1		1				½		½	½	1	1							2	2				1		
Zephyrhills	1	1	2	21	94	115	10½	4			1	1	2	1		½							1			½	½		1														
Total	166	380	546	4984	7111	12095																																					

TABLE XVII
3-Year High School Curriculum

Name of School	No. Teachers: Men	No. Teachers: Women	No. Teachers: Total	No. Pupils: Boys	No. Pupils: Girls	No. Pupils: Total	Total No. of Units	English	Latin	French	Spanish	Algebra	Plane Geom.	Solid Geom.	Trigonometry	Ancient Hist.	Mid. Mod. Hist.	English Hist.	Am. Hist.—Civics	Phys. Geog.	Gen. Science	Physiology	Botany	Zoology	Physics	Chemistry	Commerce	Man. Tr'ng	Home Econ.	Agriculture	Music	Drawing	Arithmetic	Reviews	Psychology
Clermont	1	0	1	9	5	14	12	3	3			2	1			1			1		1														
Floral City	0	1	1	2	11	13	9	3				2				1		1	1		1														
Fort White	1	1	2	22	14	36	10	3				1	1				1		1				½	½	1					1					
Groveland	1	1	2	8	8	16	11	3	3			2	1						1									½	½						
Geneva	1	0	1	3	5	8	13	3	3			2	1			1	1		1		1														
Greenwood	1	1	2	4	12	16	12	3	3			2	1			1	1			1					1										
Havana City	1	1	2	15	28	43	11	3	2			1	1			1	1		1						1										
Jupiter	1	0	1	7	2	9	10	2	2			2				1	1				1						1								
Lake Wales	2	1	3	15	15	30	12½	3	2			2	1		½	1		1					½	½	1										
Macclenny	1	0	1	5	10	15	12	3	2			2	1			1	1	1							1										
Melrose	2	0	2	6	13	19	11½	3	3			2	1				1		½						1										
Micanopy	1	1	2	10	22	32	11	3	2			2	1			1	1		1																
Newberry	2	0	2	9	16	25	14	3	2			2	1			1	1	1		1			½	½	1										
Pinnetta	1	0	1	2	12	14	13	3	3			2	1			1	1	1	1																
White Springs	1	0	1	8	23	31	14	3	3			1½	1	½		1	1	1	1	½	½														
Winter Park	1	3	4	12	20	32	16	3	2	1		2	1			1	1	1	1		1	1			1										
Total	18	10	28	137	216	353																													

TABLE XVIII
2-Year High School Curriculum

Name of School	No. Teachers: Men	No. Teachers: Women	No. Teachers: Total	No. Pupils: Boys	No. Pupils: Girls	No. Pupils: Total	Total No. of Units	English	Latin	French	Spanish	Arithmetic	Algebra	Plane Geom.	Solid Geom.	Trigonometry	Ancient Hist.	Mid. Mod. Hist.	English Hist.	Am. Hist.—Civics	Phys. Geog	Physiology	Gen. Science	Botany	Zoology	Physics	Chemistry	Commerce	Man. Tr'ng	Home Econ.: Cooking	Home Econ.: Sewing	Agriculture	Music	Drawing	Arithmetic	Reviews	Psychology
Altha	1	0	1	6	19	25	9	2	2				1	1			1			1												1					
Alva	1	0	1	7	10	17	6	2					2				1						1														
Anthony	0	1	1	5	5	10	8	2					2					1		1	½		½	½	½												
Archer	1	0	1	5	2	7	8	2	2				2					1						½	½												
Baker	1	0	1	10	6	16	8	2	2				2				1		1																		
Bell	1	0	1	2	5	7	6⅓	2				1	2					1							½												
Branford	1	0	1	4	5	9	8½	2					1				1			1	½		1	½	½												
Brooker	0	1	1	2	8	10	8	2	1				2				1	1			1																
Bunnell¹	1	1	2	2	14	16	9	2	2				2	1			1	1																			
Campbellton	1	0	1	2	2	4	7½	2					2				1	1			1			½													
Carrabelle	1	0	1	4	3	7	8	2					2				1	1			½		1	½	½												
Center Hill	0	1	1	2	7	9	11	2	2			½	2				1	1			1	½										1					
Century	1	0	1	3	8	11	8	2	2				1	1			1				1																
Chattahoochee	1	0	1	5	4	9	8	2	2				2				1	1																			
Citra	0	1	1	3	7	10	7	2	1				2				1						1														
Cocoanut Grove	1	0	1	7	12	19	8	2	2				2				1						1	½	½				½	½							
Coleman	1	0	1	6	4	10	10	2	2				2	1			1	1		1																	
Concord¹	1	0	1	2	10	12	8	2	2				2				1	1																			
Dania	1	0	1	7	8	15	8	2	1				2				1	1			1																
Elfers¹	1	0	1	6	4	10	8	2	1				2				1	1																			
Enterprise¹	0	1	1	6	7	13	8	2	2				2				1	1																			
Frostproof	1	1	2	11	7	18	8	2					2				1	1			1			½	½												
Greensboro	1	0	1	7	15	22	10	2					2				1	1					1	½	½							2	1				
Greenville	2	0	2	3	4	7	8	2					2				1			1	1			½	½												
Gretna	1	0	1	6	5	11	8	2	2				2				1	1																			
Haines City	0	1	1	3	7	10	12	2	2				2				1	1			1									½	½		1	1			
Hastings	1	1	2	6	13	19	9	2					2	1			1	1			1		1														
Hawthorne	1	0	1	5	7	12	11	2	2				1	1				1																			
Hilliard	1	0	1	4	1	5	7	2	1				2				1	1																			
Jennings	1	0	1	5	11	16	8	2	1				1	1			1	1						½	½												
Kathleen	1	0	1	5	9	14	8	2	2				2				1	1			1		1														
Lake Worth	1	1	2	15	31	46	11	2	2				1½	½			1	1			½			½					1	1							
Larkins	1	1	2	7	6	13	10	2	1				2				1	1			1		1	½	½					½	½						
Laurel Hill	1	0	1	5	7	12	8	2	2				2					1						½	½												
Lawtey	1	0	1	3	8	11	9	2	2				2				1	1			1																
Lecanto	0	1	1	0	5	5	6	2					2				1						1														
McIntosh	1	0	1	5	5	10	8	2	2				2				1	1															1				
Millville	1	1	[illegible]	19	13	32	9	2	2				2				1	1																			
Mount Dora	1	0	1	4	11	15	6	2	1				2				1																				
Oxford	1	0	1	8	10	18	10	2	1				1				1		1	1	1			½	½												
Safety Harbor	1	0	1	6	11	17	7	2	2				2				1																				
Sebastian	0	1	1	4	4	8	9	2					2	1			1	1					1	½	½												
Summerfield	1	0	1	4	6	10	11	2					2				1	1		2	1	1	1	½	½												
Wildwood	1	0	1	5	9	14	9	2	2				2				1	1			1																
Zellwood	1	0	1	2	6	8	10½	2	2				2	1			1	1					½							½	½						
Total	38	14	52	238	361	599																															

¹ Data for 1919-20.

TABLE XIX
1-Year High School Curriculum

Name of School	No. Teachers: Men	No. Teachers: Women	No. Teachers: Total	No. Pupils: Boys	No. Pupils: Girls	No. Pupils: Total	Total No. of Units	English	Latin	French	Spanish	Algebra	Plane Geom.	Solid Geom.	Trigonometry	Ancient Hist.	Mid Mod Hist.	English Hist.	Am. Hist Civics	Gen. Science	Botany	Zoology	Phys Geog	Physiology	Commerce	Man. Tr'ng	Home Econ.	Agriculture	Music	Drawing	Arithmetic	Reviews	Psychology
Aucilla	1	0	1	3	3	6	4	1	1			1				1				1													
Bellview	0	1	1	1	2	3	4	1				1				1							½										
Brewster	0	1	1	5	4	9	4½	1	1			1				1		1		1													
Bristol	1	0	1	3	2	5	4	1				1				1				½			½										
Cedar Keys	1	0	1	5	2	7	4	1				1				1																	
Crystal River	0	1	1	1	0	1	4	1	1			1				1							1										
Gardner	1	0	1	5	2	7	4	1				1					1			½			½										
Hernando	1	0	1	1	2	3	4	1				1								1													
Montbrook	0	1	1	1	0	1	5	1	1			1				1																	
Morriston	0	1	1	1	3	4	4	1	1			1				1			1	1				1				1					
Ocoee	1	0	1	2	4	6	7	1				1	1					1	1		½	½											
Reddick	0	1	1	1	2	3	5	1				1				1				1													
Sopchoppy	0	1	1	1	1	2	4	1				1					1			½			½										
St Andrews	1	0	1	5	3	8	4	1				1																					
Wellborn	1	0	1	4	5	9	4	1	1			1				1																	
Total	8	7	15	39	35	74																											

TABLE XX
Showing Number and Percent of High Schools of Each Type Offering Each Unit in Course of Study[1]

Kind of School	No. of Schools	English No.	English %	Latin No.	Latin %	French No.	French %	Spanish No.	Spanish %	Arithmetic No.	Arithmetic %	Algebra No.	Algebra %	Plane Geometry No.	Plane Geometry %	Solid Geometry No.	Solid Geometry %	Trigonometry No.	Trigonometry %	Ancient History No.	Ancient History %	M. M. History No.	M. M. History %	English History No.	English History %	American History and Civics No.	American History and Civics %	Sociology No.	Sociology %	Economics No.	Economics %
1-Year	15	15	100	6	40							14	93	1	6.6					11	73.3	2	13.3	2	13.3	2	13.3				
2-Year	45	45	100	32	71.1					2	4.4	45	100	10	22.2					39	86.6	33	73.3	2	4.4	7	15.5				
3-Year	16	16	100	14	87.5	1	6.3					16	100	14	87.5	1	6.3	1	6.3	13	81.3	12	75	7	43.8	11	68.8				
4-Year	98	98	100	97	99	41	41.8	28	28.5	8	8.1	98	100	91	92.8	63	64.3	72	73.5	92	93.9	85	86.8	47	48	94	95.9	11	11.2	4	4
Total	174	174	100	149	85.6	42	24.1	28	16.1	10	5.7	173	99.4	116	66.6	64	36.8	73	42.1	155	89.1	132	75.9	58	33.3	114	65.5	11	6.3	4	2.3

Kind of School	Physical Geography No.	Physical Geography %	Physiology No.	Physiology %	General Science No.	General Science %	Botany No.	Botany %	Zoology No.	Zoology %	Physics No.	Physics %	Chemistry No.	Chemistry %	Commerce No.	Commerce %	Manual Training No.	Manual Training %	Home Economics No.	Home Economics %	Agriculture No.	Agriculture %	Music No.	Music %	Drawing No.	Drawing %	Teacher Training: Combined No.	Teacher Training: Combined %
1-Year	4	26.6	1	6.6	8	53.3	1	6.6	1	6.6											1	6.6						
2-Year	19	42.2	2	4.4	14	31.1	15	33.3	14	31.1							2	4.4	5	11.1	3	6.6	3	6.6	1	2.2		
3-Year	3	18.8	1	6.3	6	37.5	3	18.8	3	18.8	8	50			1	6.3	1	6.3	1	6.3	1	6.3						
4-Year	47	48	7	7.1	61	62.2	68	69.4	67	68.4	65	66.4	47	48	24	24.5	21	21.4	42	42.9	12	12.3	13	13.3	2	2	32	32.6
Total	73	42	11	6.3	89	51.2	87	50	85	48.7	73	42	47	27	25	14.4	24	14	48	27.6	17	9.7	16	9.2	3	1.7	32	18.4

[1] Compiled from Tables number XVI to XIX.

TABLE XXI

Showing the Number of Pupils Registered in Each Subject of the High School for the Scholastic Year 1919-20
(63 four-year high schools included)

ENGLISH	5426	SOCIAL SCIENCES	4902
1st year	2248	Ancient History	1831
2nd year	1414	Med. and Mod. Hist.	1313
3rd year	926	English History	462
4th year	838	Am. Hist. and Civics	1296
MATHEMATICS	5342	NATURAL SCIENCES	3182
Adv. Arithmetic	132	Physical Geography	531
Algebra	3433	General Science	750
Plane Geometry	1115	Botany	510
Solid Geometry	318	Zoology	522
Trigonometry	344	Physics	467
FOREIGN LANGUAGES	3509	Chemistry	402
Beginner's Latin	1312	VOCATIONAL STUDIES	1569
Caesar	799	Agriculture	99
Cicero	197	Manual Training	241
Virgil	96	Home Economics	737
French	811	Commercial work	492
Spanish	294	MISCELLANEOUS	513

If we rank these subjects according to the registrants by groups, we have:

English	taken by	5426	pupils
Mathematics	"	" 5342	"
Social Sciences	"	" 4902	"
Foreign Languages	"	" 3509	"
Natural Sciences	"	" 3182	"
Vocational Studies	"	" 1569	"

Or, if we take them singly by subjects, we have a high correlation with the ranks on page 40 which deals with the number of high schools offering each subject of the curriculum.

Perhaps it is worth while in this connection to make a little running discussion of the course of study. To begin with, it seems a bit strange that only two-thirds as many high schools offer Spanish as French. This is all the more noticeable when we consider our proximity to Mexico, Cuba and other Spanish speaking countries to the south of us, together with the fact that in some localities within the state we have a considerable Spanish speaking population.

Practically two-thirds of all the four-year high schools offer Solid Geometry, and practically three-fourths of them offer Trigonometry.

There are several interesting things about the social sciences. To begin with, English History seems to be on the decline. It is probable that as a separate subject it will disappear from the high school curriculum. Many of our leading educators feel that we should teach English History as a part or phase of European History, so as to give it its proper setting or perspective. Sociology and Economics are making their appearance in some of the larger, stronger four-year high schools. This is a hopeful sign and a strong indication of the lines along which the social studies will develop in the next few years. In fact, there is no phase of our high school curriculum in this state which needs recasting more than our present social science course. It is hoped that we will soon come to the scheme recommended by the committee of the National Educational Association on the Reorganization of Secondary Education.* This committee recommends that we teach American History and Civics, based on an elementary view of old world background, in the earlier grades of the high school, following this by a study of European History, stressing the modern period, and closing the course with an intensive study of American history since the 17th century, especially stressing present problems of American democracy. Such a scheme would break down the present monopoly which classical education has upon the freshman in high school, and thus free him from the strangle-hold of English Composition, Algebra, Latin and Ancient History.

Throughout the nation, Physical Geography has practically disappeared from the high school curriculum. The kernel of this subject has been absorbed by General Science, Physics and the other high school sciences, or it has worked its way up to where it belongs—in the college. One of the best evidences of this statement is the fact that none of the great publishing houses are bringing out any new high school books in the field.

It is indeed a gratifying thing to see that practically two-thirds of all our four-year high schools offer General Science. In practically every state it has supplanted Physical Geography in the freshman year.

It is the hope of the writer that at our next text-book adoption, Biology will take the place of Botany and Zoology.

*Bulletin 1916, No. 28 U. S. Bureau of Education.

As separate studies, these, too, have worked their way gradually up into the college, and have been replaced by Biology. In discussing this question, a recent bulletin* from the State Department of Education of Texas, has this to say, which is a very clear statement of the condition:

> Botany and Zoology as separate high-school courses are apparently disappearing from the high-school curriculum. Only 1.4% of the Texas high school enrollment in the year 1915-1916 studied the subject of botany, while less than half this number were enrolled in zoology courses (.58%). The reports of the United States Commissioner of Education show that from the years 1910 to 1915 the percentage enrollment in high-school botany fell off 45% and in high-school zoology 59%. The question naturally arises whether we should attempt to revive the subjects, and aid them in their struggle for existence or let them take the course that geology and astronomy have taken. It should be stated here, however, that the value of botanical and zoological truths are not any the less appreciated; but the decreased interest in botany and zoology as special whole-year courses is due rather to the belief of many educators that the wanted biological truths are approached and more sanely comprehended through the *general biology course*. It is held by these educators that the function of botany is not to give knowledge about plants and plant activities, nor is that of zoology to give knowledge about animals and animal activities, but on the other hand, the educational function of both is to develop an appreciation of the principles of *life*—to give a knowledge of life and life activities. These life processes are neither botanical nor zoological—being peculiar neither to plants nor animals. They are biological and are, therefore, best presented in a course in general biology. This is the viewpoint of the majority of present writers and leaders in educational matters. Of course there are science men who disagree, claiming that the scheme is unscientific and that it is impossible to compound two distinct sciences—that the combination is an unsavory mixture, and that it is but a futile attempt of the uninitiated to make science easy and popular. Be this as it may, the fact remains that botany and zoology are disappearing as separate one-year high-school subjects. They are being crowded out by biology and agriculture just as physical geography and human physiology are being crowded out by the newer subject of general science.

*Bulletin 85, February 15, 1919, entitled The Teaching of Science.

A whole bulletin would be required if we discussed fully the subject of vocational education. Space will permit of only a few statements. It is evident that any kind of vocational work is practically unknown anywhere in these high schools except in the four-year schools, and that it is of minor importance there. For example, table XXI shows that there were in 1919-20 in 63 of these four-year high schools 1569 pupils altogether taking any kind of vocational work, while there were 3433 pupils taking Algebra, 1831 taking Ancient History and 2404 taking Latin. This ratio would be very much more against vocational work if we had the figures for the present year. This financial crisis we are facing in our schools has hit hardest the vocational subjects.* As best the writer can ascertain, a very large per cent of the high schools this year have had to drop temporarily some or all of their work in Manual Training and Home Economics. They plan, of course, to reinstate them as soon as finances will permit.

The financial pressure mentioned above has had like effect upon Music and Drawing in our schools. It is little short of an educational tragedy that we have had to strip our schools of the vocational and avocational studies, and thus leave only the traditional academic course. The struggle for the past quarter of a century has been to get this work going, with the hope that it would add the leaven to the whole lump. No critical student of our high school can fail to realize that we are woefully lacking when it comes to training our pupils in the things which function in the development of the artistic and emotional side of their lives.

So far teacher-training is a failure in the high schools of the state. The movement has long since passed out of the experimental stage in America. It is recognized in many states as a satisfactory way of supplying teachers temporarily for the elementary grades. If it is properly organized it works to an advantage. If we would recast the present law in this state so as to properly organize and finance these teacher-training departments and place them only in the good, strong high schools, so as to certificate for one or two years the graduates of these departments, we would go a long ways toward eliminating this court-house examination system now in vogue which is so very unsatisfactory. In this way, in a

*This does not apply to the Smith-Hughes work.

few years, we would be feeding into our elementary grades teachers who would be high school graduates with a little professional training, instead of the teacher who has crammed for an examination, which is neither a test of scholarship nor of professional insight.

On the whole, the Florida high school course of study is overwhelmingly classical and traditional. The whole affair looks to college entrance rather than to occupational pursuits. No one questions the fact that *one* of the functions of the modern high school is preparation for college entrance, but it is *only one* of its numerous functions. If all our boys and girls who go to high school eventually went to college, perhaps no criticism could be made of our present practices, but they do not. To throw some light on this situation, table XXII has been prepared. In these percentages some allowance has to be made, since we are figuring the number of graduates of June 1920 on the basis of February 1921 enrollment. The same thing is true of the per cent going to college. This, however, is not enough to make any material difference. The table follows.

TABLE XXII

Showing the Percentage of High School Enrollment Eventually Graduating and Going to College

Kind of School	No. of Schools	Total Enrollment	Number Graduates the June Previous				Number Previous June Graduates Away in College Following Year			
			Boys	Girls	Total	Per Cent	Boys	Girls	Total	Per Cent
4-Year	98	12095	485	847	1332	11	266	351	617	5.1
36 Southern Assn. Schools	36	7234	314	594	908	12.6	186	252	438	6.1

From table XXII we see that of the 12095 pupils in the 98 four-year high schools only about 11 or 12 per cent will eventually graduate and only about 5 or 6 per cent will eventually find their way to college. That forces us to face squarely this question: Which shall we train, the 5 or the 95? In order to be sure of preparing the 5 shall we force all pupils through the narrow curriculum looking only to college entrance? The task and objective of the modern high school is to prepare

both groups without sacrificing either. It is most certainly the duty of the modern high school to prepare the 5 to enter the higher institutions of learning, but it is likewise its duty to feed the 95 into their life-occupations with some helpful training. It is for this reason that the writer feels justified in saying that on the whole the high school course of study is too classical and traditional to serve the best interests of all its pupils. The 76 one, two and three-year high schools are just the skeletons of real modern high schools. All the pupils get in these schools is formal English, formal mathematics, foreign language, the traditional history course and a modicum of science usually taught without any laboratory or equipment.

The teacher is not to be blamed and the pupil is to be pitied. They are both the victims of the system. It is utterly impossible and worse than foolish for one teacher to try to teach two full years of high school work or for two teachers to try to carry a full four-year high school course. Failure is the inevitable outcome. Then what is the solution? For Florida, as for the rest of the country, the only solution is the junior-senior high school. Not the two and four-year high schools as we use these terms in the state, but the modern junior high school or the six-three-three plan. Instead of one teacher trying to carry a two or three-year high school course, or two teachers a three or four-year course, we should attempt less and do more. Instead of these one, two and three-year high schools offering a narrow curriculum of the traditional type, they should organize a real Junior High School consisting of grades 7, 8 and 9, and then transport their graduates to some centrally located point for their Senior High School work in grades 10, 11 and 12. Instead of having a large number of aspiring high schools with one teacher seeking to do two or three years' work, we should have a series of well organized Junior High Schools of grades 7, 8 and 9, attempting less number of grades, but offering a greater variety of work in each grade. Thus, by attempting a less number of years of work, they would be enabled to offer a wider, richer, fuller curriculum which would meet the needs of the 95 as well as the 5.

The Junior High School Movement has already found its way into Florida, in a number of the schools. Tampa, so far,

has made further strides along this line than any other place in the state. It has two Junior High Schools that are an honor to the city. In these schools we see many of the essential features of the Modern Junior High School in practice. Of course, they do not have, as yet, all that we would like to see them have, but they are moving out in the right direction. It is not best, in a new movement, to jump full fledged into an organization. There are always some "first steps." Evolution, rather than revolution, is usually desirable. Perhaps they have done about all that is possible under the present state organization. Development along certain lines is well nigh impossible until we get a change in the state organization and control of the high school in such matters as course of study, textbooks and graduation requirements. It is for this reason that so much depends on the textbook adoption, which occurs soon. If regulations can be made so as to have textbooks adopted on two bases; namely, the 8-4 plan and the 6-3-3 plan, we will open up the way for greater progress. That kind of a scheme would allow the more progressive schools to organize their work on the Junior-Senior basis without violating the regulations of the higher authorities, or losing their places on the accredited list. The following will show some of the innovations that Tampa has adopted. By putting the Foreign Languages, Algebra, Commercial Work, Manual Training and Home Economics, down into the 7th and 8th grades; by finding a place in their curriculum for the physical and artistic development of the pupils; by instituting departmental teaching, promotion by subjects, mid-year promotions, etc., they are cautiously and sanely inaugurating the real Junior High School movement, which means a new day in secondary education. Their results speak for themselves and are the final test. While Tampa's population increased from 37,000 to 51,000 her high school enrollment increased 4½ times, and the number of her graduates 5¾ times. This indicates somewhat the power to draw, as well as the power to hold the students in the high school during the adolescent period, and this is one of the chief reasons for which the Junior High School movement was instituted.

Such, Gentlemen of the Conference, is the present status of our high schools. I feel we shall work blindly unless we proceed in the light of these facts. In order to freshen your memories, may I restate some of the major facts, and with that I close.

I. Kind of high schools.
98 four-year high schools.
16 three-year high schools.
45 two-year high schools.
15 one-year high schools.
2 junior high schools.

II. Length of high school term.
1. No. months high schools run:
8.8 percent of high schools run 7 months (or less).
57.4 percent of high schools run 8 months.
33.8 percent of high schools run 9 months.
2. High school enrollment classified according to length of high school term attended:
1.2 percent pupils in schools running 7 mos. (or less).
25.7 percent pupils in schools running 8 mos.
73.1 percent pupils in schools running 9 mos.

III. Size of high schools as measured by number teachers employed.
36.2 percent are one teacher high schools.
15.5 percent are two teacher high schools.
8.6 percent are three teacher high schools.
13.8 percent are four teacher high schools.
74.1 percent are four teacher high schools (or less).
4 percent are over nine teacher high schools.

IV. High school enrollment classified according to type of high school:
92.3 percent enrolled in four-year high schools.
2.7 percent enrolled in three-year high schools.
4.5 percent enrolled in two-year high schools.
.5 percent enrolled in one-year high schools.

V. Average size of the high schools.
One-year high school is 5 pupils.
Two-year high school is 13 pupils.
Three-year high school is 22 pupils.
Four-year high school is 123 pupils.

You can see at a glance that we have a complicated problem confronting us. It will be almost impossible to devise a curriculum to fit such a condition. These seventy-six one-, two- and three-year high schools are bound to be reorganized. They must be made into four-year senior high schools or cut down to nine grade junior high schools. They cannot intelligently be encouraged to develop in their present form. Then my conclusion is, we need to reorganize on the junior-senior

basis. We should have at least one senior high school in each county with as many strong junior high schools as conditions warrant. This will place a high school education of the proper sort in reach of every Florida boy and girl.

Mr. Sealey: I am sure that we shall be greatly benefited by the splendid information that Dr. Roemer has brought us, because it will make our studies very much more intelligent. We have a basis for our work now that we did not have before. These figures were taken from reports made this year, so that it is the latest thing we can have, and we are safe in continuing our studies on this basis.

Mr. Workman: Are those figures authentic?

Mr. Roemer: Yes. They were given by you high school principals.

Mr. Workman: It would be a good plan to get some idea from the body here as to some action on these suggestions that we make a course of study to suit both cases. Have one committee commence to work on the 8-4 plan, and another committee on the 6-3-3 plan.

Mr. Draper: We better not do that before considering what we are going to do. We should at least ask Dr. Roemer some questions about the Junior-Senior high school organization. I am perfectly willing to adopt his idea and those recommended by the N. E. A., since that organization has worked this out on the 6-3-3 plan. As far as I am concerned, it is as good a course as I want, but we must decide definitely now about the 6-3-3 plan.

Mr. Evans: We ought to have a course of study made to fit all classes. The Junior High School has come to Florida, and has come to stay. We will have to provide for it, but at the same time it will be a good while before we can make an absolute course of study to fit both classes.

Mr. Frye: Can we make a course of study flexible enough to fit both cases, and not make two distinct courses?

Mr. Roemer: I think your idea exactly right. The question is whether it can be made to work. It must work largely for schools of four teachers and an eight months term.

Mr. Draper: It seems advisable to me to provide for schools with four teachers running eight months. That seems to be the most common type we have to handle.

Mr. Roemer: It occurs to me that it would be a mistake to outline the course of study on a nine-month school term when as yet the great majority of our schools run eight months or less. It is one thing to outline an ideal course and it is another thing, perhaps, to meet a practical situation. My position stated another way is simply this: It would be a mistake to harness up a high school course of study on a nine-month basis and expect it to work to the best advantage where most of the schools as yet run only eight months or less. Of course, some of you are thinking, why cannot the teacher cover the nine-month course in eight months by selecting and teaching the essential things involved. I am wondering if it would not be advisable for this group of trained men to do that selecting and organizing itself and consequently hand over to the inexperienced teacher the subject matter already organized and ready for instruction. In other words, is not this group of men the logical party to select and organize the chief things in a nine-months course to be taught in eight, rather than the average inexperienced and usually untrained teacher? I am simply raising this question for our consideration at this point.

Mr. Cawthon: I would like to announce to the people present that it has been my pleasure during the last year or two to hand out to hundreds of our principals and teachers copies of the "Cardinal Principles of Secondary Education." If there is anyone here who does not have a copy, I have a sufficient number for distribution, and will be glad to give him one, if he will call for it. I would like to speak of a few things in connection with our small high schools. During the five years it has been my privilege to go among the schools of the State, the little school of two high school grades has been a source of worry. Somehow, there has seemed to be a hopelessness about doing anything for it. It is true I have not done a great deal for other schools, but when I go to the schools of, say 150 pupils, and find 6 or 7 in the ninth grade, and possibly 2 in the tenth, and one teacher trying to teach seven or eight classes, usually the principal of the school, carrying on the so-called traditional course of study, the Caesar, Ancient History, or the two years of Algebra, etc., there seems to be a lifelessness about it all, and no one seems to know any remedy. I am wondering if something along

the lines proposed here, a reorganization of grades seven, eight and nine, even as we stand now here in Flordia, would not help? Mr. Evans has four or five such schools in his county; Mr. Holmes has one or two in Suwannee County. They are distributed all over the State. I am wondering if our course of study is not purely traditional? I wonder if we have given it sufficient thought? I would like to read a few paragraphs: (Reading from bulletin)

"In the reorganization of our secondary schools, all schools doing work of secondary grade will be organized, ultimately, as high schools—Standard, Four-Year Schools—or Junior High Schools. The many rural schools now doing two or three years of high school work will be the first to be converted into junior high schools. Here the needs of the various communities are so similar, and the teaching force and student bodies so small, that a program of studies, suited to the needs of rural people, has been formulated, providing for little variation on the part of either teachers or pupils."*

Of course we have not the rural communities that they have in other states. You can travel here for miles and miles and not see a farm or residence, and then go right into a little town and then you go right out of that town and do not see anyone else. We are, perhaps, peculiar in this respect. We do not have the same foundation for the consolidated rural school found in other states and it occurs to me that if we could get a new course of study for schools of that class, and put more life into it, and let it end with the ninth year, instead of carrying it through the tenth, we would improve conditions. I know that people of the rural communities do go to college, and their needs should be recognized, but I believe in the reorganization of this matter by putting new interest and new life into it, vitalizing it and closing it up with the ninth year. We now require for junior high schools four teachers, fifty pupils, etc., with at least ten in the ninth, and one teacher devoting full time to high school work. That means the principal and means at least seven classes under the present arrangement and generally means neglect of the rest of the school. Those here are not directly concerned, but you have these schools in your county, and you have to deal with them;

*Manual and Courses of Study for the High Schools of Virginia, 1919.

you have someone now and then wanting full credit, and I believe that this body of men can in future by talking together, improve that situation, and while it will affect only a small part of our high school population, it is a part that should not be ignored.

Mr. Frye: There is another thing that, it seems to me, we should consider at this time. We realize the fact that everything in the world is going forward, and we are being attacked on all sides by business people and others for our inefficiency, and being told almost every day that the school is more or less of a failure because of the fact that it is not vitalized. It seems to me that if we are going to have a broad foundation, we should have a minimum requirement, or a maximum requirement, or a double standard, as Mr. Roemer mentions. We should consider that we are not going to continue just as we are now for a great many years.

Mr. Draper: The Smith-Towner bill may not pass, and it may; I really hope that it may. I hope that it may pass for various reasons, and whether or not bills of a like nature come into being, we shall of necessity reorganize. It will be a big reorganization in order to meet the demands, and we might just as well do it right now. I move that we adopt a double standard to meet these two conditions.

Mr. Sealey: Do I understand that each one of these committees proceed to work out a program, one on the 8-4 plan, and one on the 6-3-3 plan, if this motion carries?

Mr. Cawthon: Yes.

Mr. Sealey: All in favor of the motion as stated, say "Aye," all opposed, "No." The motion is carried.

Mr. Cawthon: There should be no interference with the present course of study. We can study the situation, get the facts in hand and be prepared. We might go a little further and say that it should be so and so.

Mr. Roemer: I am just wondering since Mr. Cawthon's discussion if it would be advisable to distinguish between the City Junior High School and the Rural Junior High School. I wonder if we could harness these 60 one- and two-year high schools I have mentioned, located in the rural districts, to the Junior High Schools in cities like Tampa or Jacksonville? In Virginia they have Rural Junior High Schools and City Junior

High Schools. I am wondering if that would be advisable for us or not? I am just asking the question.

Mr. Frye: As I understand this, we have already passed a ruling now for a 6-3-3 plan and an 8-4 plan, and accordingly, as I get it from the discussion that Dr. Roemer has offered here of free and limited electives, this will work. I should think, gentlemen, that the limited electives will take care of that. While it is true that we could work out a plan for the Rural Junior High School and the City Junior High School under this system of limited electives, he has outlined, don't you think that will take care of the situation, so that the Rural Junior High School can offer those subjects pertaining to the rural work, and the City Junior High School can offer work that best fits for city life. In that way, it seems to me, we could solve this problem.

Mr. Cawthon: It would be a question of whether the Junior High School would have the same teaching force. If so, Mr. Frye would be right. If they had as many teachers as they are now required to have, and had one grade less, which generally means only one or two pupils, and had the same number of teachers, then we could fit those pupils to go from the last year of the Junior High School into one of the large schools, such as Plant City, Tampa, etc. I am not sure, but I believe that it can be done.

Mr. Sealey: Any further discussion? Is the Committee on Mathematics ready to make a report?

Mr. Cawthon: The Chairman of the Committee announced that he would be here, but I do not think he is here. Mr. C. M. Jones is not here but Miss Delaney is here and ready to make a report for the Committee. I move that we interchange on the program the places of the two committees.

Mr. Sealey: Since the Science Committee is ready to report, we will call on the Science Committee and following this report, we will have a round table discussion.

Mr. Evans: We are just twenty-four hours ahead with the program; this should come tomorrow afternoon. I wish to say that I have a great deal more here than I am going to read, and will say that if you get tired before I get through, if you will just signify this to the Chairman, he will call me down and I will be satisfied. Your Committee does not claim any originality. We have tried to study the most advanced

ideas we could find anywhere and have incorporated them in this report. This is not really a report, nor is it intended to be regarded as a finished course of study. We do not expect that a single word or idea in this so-called course of study need necessarily be adopted. It is merely suggestive. If, perchance, you should read this report, I am afraid it would be rather heavy reading. We have quoted liberally from all available sources and have put quotation marks wherever possible.

REORGANIZATION OF THE SCIENCE COURSE FOR THE HIGH SCHOOLS OF FLORIDA

By R. M. Evans, Principal Quincy High School

The report of the committee on science of the Commission on Reorganization of Secondary Education appointed by the National Education Association says "six great objectives in secondary education, namely, health, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical characters are realized through science teaching." (Bulletin, 1920, No. 26, Bureau of Education.) Furthermore science study should develop "interests, habits, and abilities; teach useful methods of solving problems, stimulate the individual to such activities as will bring pleasure and profit; give control of a large number of facts useful in school, home and community; and finally should contribute to the culture and refinement of those pursuing science courses."

Science cannot be taught by any but well-prepared teachers. "The science teacher should be an enthusiastic lover of science, and a believer in its great value, when rightly used, in the uplift of humanity." He who is not a natural leader of young people ought never to attempt to teach science, nor should one who lacks vision, initiative and energy under any circumstances undertake the subject. Science cannot be successfully taught without a certain amount of laboratory equipment, but results will depend far more upon the teacher than upon the equipment.

Instruction in science should by all means take advantage of what the pupil already knows, and should form a definite connection with his every day experience and activities. To this end problems and projects having to do with objects and

occurrences familiar to the pupil can be assigned, and their solution made a means of both discovery and growth. The term "project" has been defined as "any projected or proposed activity or experience which an individual purposes to enter upon or carry through to the end. It may be to make an electric motor, to understand how a motor works, or why it will not work, to repair a broken motor, or to find out what are the origin and nature of any one of the materials of which a motor is constructed; it may be to find out about the structure and proper manipulation of an automobile or a bicycle; it may be to rid a community of mosquitoes or house-flies, or to find out how some former generation of men dealt or failed to deal with any particular problem of health or disease; it may be to find out how to prepare the meals for a group of guests throughout a summer's vacation. The project may involve any specific thing which the pupil purposes to do, whether this thing is a small piece of work involving a few minutes' effort, or a prolonged piece of work lasting for weeks, the unit depending upon the conception of the piece of work which it is purposed to accomplish." (Bulletin No. 26, 1920, Bureau of Education.)

The adopted textbook in any subject should form the basis of study for the class, but other texts should be easily accessible and pupils encouraged to find all possible information on any given assignment in addition to that given by the adopted text. In this connection it is recommended that magazine articles, newspapers, reference works, and other such sources be drawn upon to secure needed information on any problem, topic or project. The teacher should be able to direct pupils in securing Government bulletins relating to any given topic.

THE CLASS AT WORK

Class work in science consists of three closely related parts, namely: (1) Recitation, (2) Lecture-demonstration, (3) Laboratory.

1. The recitation should consist of questions and answers on textbook assignment, reports on special assignments, and class conference on problems under consideration. The teacher should under no circumstances monopolize the time of the class, but each pupil should be made to feel that he must add something to the class discussion. Good order in class may

be maintained by requiring the use of parliamentary practice.

2. The lecture-demonstration should be used to make clear some point arising in connection with the recitation, the class conference, or some problem under discussion; or it may be necessary for the teacher to take occasion to perform an experiment requiring greater skill than can be expected of the class. The lecture-demonstration experiment should be a model for the pupils, and to be sure of its success the teacher would do well to test it out before the class assembles. Failure of an experiment before the class is embarrassing to both teacher and pupils, and should be avoided if possible.

One or two selected pupils can be of assistance to the teacher in experiments of this kind, and all the pupils may take notes. The experiment may later be written in the pupils' permanent note books, but with the notation "Performed by the teacher."

3. Work done in the laboratory should be closely related to that done in the class. Unless the teacher is provided with a capable assistant not more than twenty-four pupils should be working in the laboratory at one time, and not more than two pupils should ordinarily be working together on the same experiment. It is not necessary nor always desirable that all pupils perform exactly the same experiments at the same time, nor is it necessary to perform the same ones in exactly the same way.

Pupils should be required to assemble and set up apparatus, or to arrange materials for all laboratory work, the teacher being free to make suggestions to those in need of help.

No experiment should be given unless it will help to make clear some problem under consideration. Experiments devised to prove generalizations already clear to the pupil are useless; those requiring a collection of data are of little value; those serving as "busy work" are childish; and those minutely quantitative are beyond the comprehension of high school pupils. Quoting again from Bulletin 26, Bureau of Education, "The laboratory should be a place where the pupil puts questions to nature, observes accurately, and deduces conclusions logically; not a place where directions are followed blindly and meaningless results are obtained."

Field work and excursions to factories and other industrial plants are highly beneficial; but such work should be definitely

planned beforehand, notes should be taken, and definite reports covering different phases of the investigation considered in the next class conference. Excursions that resolve themselves into mere sight-seeing trips are worse than useless.

All data with reference to experiments performed should be recorded in a bound notebook. The teacher should as far as possible ascertain before the pupils leave the laboratory the degree of accuracy with which the notes have been taken. Afterwards the data recorded in the laboratory notebook should be incorporated into neatly written, accurate descriptions of experiments recorded in permanent notebooks. Drawings of apparatus add much to the appearance of note books, and indicate the degree to which the pupil observed accuracy and precision in performing his experiments.

The teacher should give the class general directions for recording experiments, but content rather than uniformity should be considered in grading the work. Under no circumstances should a printed form with blank spaces left for answers to questions ever be used.

Inasmuch as a majority of Florida high school graduates will enter college it is well for the teacher to keep constantly in mind college entrance requirements in science.

The wide-awake and energetic teacher will find in science clubs an energizing force that will give impetus to the entire subject. In large high schools separate clubs in physics, chemistry, biology, etc., may be maintained, but in the smaller schools it will probably be better to have only one club combining the various subjects.

SEQUENCE OF SCIENCES

Under this head we must keep in mind the needs of several classes of high schools. The Junior-Senior high school, embodying the 6-3-3 plan has already made its appearance in Florida, and has in all probability come to stay. It will, however, be a good many years before the Two-Year, the Three-Year, and the Four-Year high schools will be entirely superseded by the Junior-Senior school, and consequently the needs of these schools must be considered in the formulation of any course in science.

Another important consideration in making a course of study is provision for the needs of high schools of different sizes, equipment and teaching forces.

The following classes of high schools should be provided for:

1. The Junior-Senior high school.
2. The large Four-Year high school. (Enrolling 300 or more pupils.)
3. The medium-sized Four-Year high school. (Enrolling 100 to 300 pupils.)
4. The small Four-Year high school. (Enrolling less than 100 pupils.)
5. The Three-Year high school.
6. The Two-Year high school.
7. The Smith-Hughes agricultural high school.

The following sequence of sciences is arranged for these various classes of high schools:

1. Junior-Senior high school.
   - (a) Seventh year—Physiology and hygiene.
   - (b) Eighth year—General science.
   - (c) Ninth year—Zoology and botany. (Half year of each.)
   - (d) Tenth year—Chemistry, physics, physiography, advanced zoology, advanced botany, household chemistry, industrial chemistry, industrial physics. (Elective.)
   - (e) Eleventh year—Electives as in tenth year.
   - (f) Twelfth year—Electives as in tenth year.

Junior-Senior high schools enrolling not more than 300 pupils should offer courses in science more restricted than can be offered by the larger schools. In such schools the work of the last three years should be about as follows:

Tenth year—Physiography.
Eleventh year—Chemistry or Physics.
Twelfth year—Physics or Chemistry.

If eleventh and twelfth year classes are small the two may be combined and chemistry and physics taught in alternate years.

2. The large Four-year high school.
   - (a) First year—General science including hygiene.
   - (b) Second year—Zoology and botany. (Half year each.)
   - (c) Eleventh and twelfth years—Differentiated elective courses to meet special needs and interests as follows:
     - (i) Chemistry—General chemistry, and chemistry specialized for various curriculum needs, such as household chemistry, industrial chemistry, etc.

(ii) Physics—General physics, and physics specialized for various curriculum needs, such as physics of the home, industrial physics, etc.
(iii) General geography or physiography.
(iv) Advanced biological sciences.

3. The Medium-Sized high school of four years.
   (a) First year—General science including hygiene.
   (b) Second year—Zoology and botany. (Half year each.)
   (c) Third year—Chemistry, giving emphasis to industrial, farm, and home chemistry.
   (d) Fourth year—Physics, with special stress upon home, industrial, and farm physics.
4. The small Four-year high school.
   (a) First year—General science including hygiene.
   (b) Second year—Zoology and botany. (Half year each.)
   (c) Third year—Chemistry or physics.
   (d) Fourth year—Physics or chemistry.
   Physics and chemistry classes should be alternated by years.
5. The Three-year high school.
   (a) First year—General science including hygiene.
   (b) Second year—Zoology and botany. (Half year each.)
   (c) Third year—Chemistry or physics according to the needs of the community.
6. The Two-year high school.
   (a) First year—General science including hygiene.
   (b) Second year—Zoology and botany. (Half year each.)
7. Smith-Hughes Agricultural high school—To be supplied.

GENERAL SCIENCE

This subject is not intended as an introduction to subjects to be taken later, nor is it given primarily to awaken a desire for further work in science—although it may have that effect—but the main purpose is to create in the pupil ability to meet and solve the problems confronting him every day in the home, the shop, the street, the farm, and the school, and to cause him to think clearly and accurately about common objects and happenings. Quoting still again from the Bureau of Education Bulletin 26, "It (general science) should prove the very best training for pupils who can take only one year of high school science." But the required unit for graduation should be physics, chemistry, or biology.

The teacher can find in textbooks many suggestive topics, and these can be supplemented by usable material lying all around him.

General science lends itself easily to the project-problem method of teaching, and the wise teacher will utilize the interest which can be aroused and maintained by this mode of instruction. There ought to be not one moment of listless or meaningless effort in the class conference or in the laboratory period if the teacher is alive to the opportunity to lead his pupils to make discoveries for themselves in the realm of the commonplace all about them. Air, water, fire; germination, growth, decay; heat, magnetism, electricity, and light; upheaval, erosion, motion, and sound—these and many other subjects bring up their hosts of related subjects, and these in turn still others, until the number of projects and problems presented for selection is practically exhaustless.

Class—Single standard period, three times per week during the school year.

Laboratory—Double standard period, two times per week during the school year.

The class work includes:

1. The completion of a standard textbook, with daily recitations three times per week throughout the school year.
2. Lecture-demonstrations by the teacher, assisted by selected pupils.
3. Frequent class conferences to consider given problems and topics.

The laboratory work includes:

1. Not less than sixty exercises during the school year. By "exercises" is meant experiments, reports on assigned problems, and all work requiring "observation and interpretation of facts."
2. When performing experiments it is desirable in most cases for not more than two pupils to be working together.

Syllabus of General Science

(Based upon Elhuff's General Science. Prepared by J. A. Cruikshank, teacher of science in the Gadsden County High School)

I. Introduction.
   1. Why study science.
II. Health.
   1. Meaning of health.
   2. Value of health.
   3. School work and health.
   4. Success and health.
   5. Air, water, food, and health.
III. Chemistry of common things.
   1. What chemistry is.
   2. Molecules.
   3. Atoms.
   4. Acids.
   5. Soap.
   6. Bases.
   7. Neutral substances.
   8. Hard water.
   9. Salts.
IV. Chemistry of Baking.
   1. Reasons for cooking.
   2. Study of baking powder and soda.
   3. Yeasts.
V. Preservatives and disinfectants.
   1. Germs.
   2. How to destroy germs.

VI. Habit forming agents.
1. Stimulants.
2. Narcotics.
3. Patent medicines.

VII. Oxygen and oxidation.
1. Air.
2. Preparation of oxygen.
3. Oxidation.
4. Kindling point and spontaneous combustion.
5. Friction matches.

VIII. Carbon dioxide.
1. Carbon and its forms.
2. Preparation of carbon dioxide.
3. Uses of carbon dioxide.

IX. Breathing and ventilation.
1. Breathing.
2. Mouth breathing and its effects.
3. Nose breathing.
4. Ventilation.

X. Matter and energy.
1. Matter (Defined, etc.)
2. States of matter.
3. Gravity.
4. Energy.

XI. Heat.
1. Definition — introductory facts.
2. Thermometers — uses, how made, etc.
3. Meaning of temperature.
4. Calorie.
5. Specific heat.
6. Sources and effects of heat.

XII. Heat of Vaporization.
1. Introductory remarks.
2. Boiling temperature.
3. Distillation.
4. Cooling by evaporation.

XIII. Heat of fusion and dissolution.
1. Heat of fusion.
2. Effects of salts on freezing.

XIV. Heating Buildings.
1. Transmission of heat.
2. Primitive methods of heating.
3. Modern methods of heating. (a) Open stove, (b) Hot air system, (c) Steam heat, (d) Hot water system.

XV. Food.
1. Human body a machine.
2. Cells.
3. Nutrients.
4. Water and mineral foods.
5. Tests for nutrients.
6. Fuel value of foods.
7. Daily fuel needs of the body.
8. Bodily heat output.
9. Nutritive ration.
10. Varied diet.
11. When and how to buy.

XVI. Water.
1. Sources.
2. Why water should be purified.
3. Methods of purification.
4. Use of water while camping.
5. Water as a solvent.
6. Physical properties of water.
7. States of water.
8. Water and climate.

XVII. The Air.
1. Mixture of gases.
2. Movements of air.
3. Density of air.
4. Weight of air.
5. Air pressure.
6. Barometers—kinds and uses.
7. Air currents.
8. Rain, snow, dew, and frost.
9. Isobars and isotherms.
10. Weather maps.

XVIII. Some properties of gases.
1. Gas pressure.
2. Boyle's law.
3. Compressed gases.
4. Compression and heat.
5. Refrigeration.
6. Artificial ice.
7. Liquid air.
8. Natural and artificial ice.

XIX. Simple Machines.
1. Evolution of machines.

2. Definitions — energy, force, work.
3. Unit of work.
4. A machine.
5. Mechanical advantage.
6. Efficiency.
7. Levers.
8. Classes of levers.
9. Incline plane.
10. Wedge.
11. Screw.
12. Pulleys.
13. Wheel and axle.
14. Power.

XX. Water wheels and windmills.
1. Water power.
2. Overshot wheel.
3. Undershot wheel.
4. Pelton water wheel and motor.
5. Turbine water wheel.
6. Value of stream or waterfall.
7. Windmills.

XXI. Steam and gas engines.
1. Steam.
2. Steam engine.
3. Uses of steam engine.
4. Steam turbines.
5. Gas engines.
6. Efficiency of engines.

XXII. Liquid pumps.
1. Influence of air in pumping liquids.
2. Siphon.
3. Lift pump.
4. Force pump.
5. Centrifugal pump.
6. Wells and how to get water from them.

XXIII. Gas pumps.
1. Gas pumps—introductory.
2. Compression pump.
3. Exhaust pump.
4. Pneumatic dispatch tubes.

XXIV. City water supply.
1. Problem of pure water.
2. Methods of purifying water.
3. Methods of supplying water.
4. Why water pressure is not uniform.
5. Equal pressure.
6. Cost of city water.
7. Water supply and forests.

XXV. Magnets.
1. Natural magnets.
2. Artificial magnets.
3. Magnetic attraction and repulsion.
4. Nature of magnets.
5. Induced magnetism.
6. Magnetic field about a magnet.
7. Care of magnets.
8. How to magnetize steel.
9. The earth as a magnet.

XXVI. Electrical Appliances and machines.
1. Electricity.
2. Electrification by friction.
3. Lightning rods.
4. Current electricity.
5. Electrical units—Ohm, volt, ampere.
6. Voltaic cell.
7. Prevention of polarization.
8. Daniel cell.
9. Gravity cell.
10. Dry cell.
11. Magnetic field about a current.
12. Electromagnet.
13. Electric bell.
14. Telegraph.
15. Electric lights.
16. Telephone.

XXVII. Light.
1. Diffused light.
2. Lenses.
3. Cameras.
4. Spectrum.

XXVIII. The Human Eye.
1. Structure.
2. How we see objects.
3. Defects of eye.
4. Care of eyes.
5. Sight and health.

XXIX. Artificial light.
1. First artificial light.
2. Oil and gas.

3. How lamps make light.
4. Illuminating substances.

XXX. Sound.
1. Personal experiences.
2. Caused by vibrations.
3. Transmission of sound.
4. Reflection of sound.

XXXI. Vocal cords and the ears.
1. Vocal cords.
2. The voice.
3. The ears.
4. Hearing.
5. Care of ears.

XXXII. The soil.
1. The soil.
2. Origin.
3. Physical composition.
4. Disintegrated rock.
5. Soil water.
6. Soil air.
7. Humus.
8. Bacteria and other living organisms.
9. Chemical composition of soil.

XXXIII. How to care for soil.
1. Value of this knowledge.
2. When to cultivate.
3. Why cultivate plants?
4. Soil in beds, pots, etc.
5. Soil drainage.
6. Irrigation.
7. Effects of sun's heat on soil.
8. Erosion.
9. Prevention of erosion.

XXXIV. How plants grow.
1. Seeds.
2. Grain.
3. Testing grain for nutrients.
4. Germination.
5. Roots.
6. Stems.
7. Leaves.
8. Flowers.
9. Producing new varieties.
10. Seedless fruits.

XXXV. Propagation of plants.
1. Use of seeds.
2. Use of roots.
3. Use of cuttings.
4. Grafting and budding.
5. Transplanting.
6. Shade trees.
7. Forest trees.

XXXVI. Use of plants to man.
1. For food.
2. For clothing.
3. Cotton, flax, hemp, jute.
4. Plants for rope and twine.
5. Plants for paper.

XXXVII. Low forms of plant life.
1. Algae.
2. Fungi.
3. Bacteria.

XXXVIII. Plant diseases and pests.
1. Introductory paragraph.
2. Wheat rust.
3. Apple rust.
4. Brown rot.
5. Pear blight.
6. Other diseases of plants.

XXXIX. The animal series.
1. Introductory paragraph.
2. Protozoa — one-celled animals.
3. Worms.
4. Insects.
5. Crayfish.
6. Amphibians.
7. Value of amphibians.
8. Reptiles.
9. Birds.
10. Mammals.

XL. Animals as disease carriers.
1. House fly.
2. Mosquito.
3. Rat and flea.
4. The hog.
5. Hook worm.

XLI. Man's place in nature.
1. Introductory statements.
2. Selecting a home.

XLII. The earth and its neighbors.
1. The earth very old.
2. Earth and sun.
3. Earth and moon.
4. Eclipse of sun and moon.
5. Planets.
6. Stars—meteors.

PHYSIOGRAPHY

General science has largely replaced physiography as a first year science, and perhaps rightly so, but there is no reason why this subject should be entirely eliminated from the Florida course of study. Many of the larger schools of the near future will offer a number of electives in science, and for the advanced student a course in general geography or physiography will prove invaluable.

The relation of physiography—earth science—to the heavenly bodies; the past geological history of the earth; the evolution of the earth to its present state; the development of the plant and animal kingdoms; the history and work of man; the action of waves, tides, ocean currents, winds, rain, snow, ice, earthquakes and volcanoes; the causes of deserts; climate —its causes and effects; the connection between location and commercial and intellectual progress—all these and many other questions of utmost interest can be made wonderfully effective if undertaken by means of the problem-project-conference plan.

Class—Single standard period three times a week for the school year.

Laboratory—Double standard period twice a week for the school year.

Class work includes:

1. Completion of a standard textbook, supplemented by reports on assignments for individual investigation, class conference, etc.
2. Lecture-table demonstrations by the teacher, assisted by selected pupils.

Pupils are expected to do library work, make excursions for observing geographical phenomena and material, definitely record all observations, and collect specimens and clippings. Lantern work, magazines, government reports and maps, combine to make the course in this subject interesting and effective. In field work particular rather than general problems are desirable.

The text now in use is Tarr's New Physical Geography, and should this book be readopted it is recommended that the Laboratory Manual for Physical and Commercial Geography by Tarr and von Engeln be used as a guide in laboratory work. A Guide for Laboratory Teaching, by O. D. von Engeln con-

tains many practical hints for the teacher in carrying out the work, and where all needed material may be secured.

The following suggestive exercises were taken from A Brief Laboratory Course in Physical Geography, by Everly, Blount and Walton. The list was selected by Professor F. W. Simonds, of the University of Texas, and is given here as it appears in Bulletin 85, February 15, 1919, Department of Education, State of Texas.

1. A Globe Exercise: To study latitude and longitude, etc., on a globe representing the rotating earth.

2. Sunrise and Sunset Graphs: To study and compare graphically the lengths of day and night through the year at different latitudes.

3. Standard Time: To study the time belts commonly employed in the United States.

4. A Study of Minerals: A study of the characters and properties of Quartz, Feldspar, Mica, Hornblende, Calcite, Lead Ore and Iron Ore.

5. The Study of Rocks: (a) Granite and gneiss; (b) Limestone and marble; (c) shale and slate; (d) sandstone and quartzite; (e) miscellaneous rocks.

6. Composition of Soil: To study the composition of soil.

7. Chalk Modeling: A method of representing surface relief.

8. Introduction to Topographic Maps: An explanation of contour maps.

9. Drainage Areas: To map and study the drainage of the United States.

10. Minnesota.—St. Paul Sheet, U. S. G. S.: To study the gorge and terraces of the Mississippi River near St. Paul.

11. Louisiana.—Donaldson Sheet, U. S. G. S.: To study the swamp flood plain and levees along the lower course of the Mississippi River.

12. Illinois.—Ottawa Sheet, U. S. G. S.: To study a region of immature surface drainage. (The picture supplement should be included in this exercise.)

13. North Dakota-Minnesota.—Fargo Sheet, U. S. G. S.: To study the characteristics of a newly made lake plan.

14. Arizona.—Kaibab Sheet, U. S. G. S.: To study a high plateau region.

15. Pennsylvania.—Harrisburg Sheet, U. S. G. S.: To study portions of the Appalachian Mountains in Pennsylvania.

16. California.—Shasta Special Sheet, U. S. G. S.: To study a young but inactive volcano.

17. California.—Shasta Special Sheet, U. S. G. S.: To study the glaciers on Mt. Shasta.

18. Wisconsin.—Whitewater Sheet, U. S. G. S.: To study a glacial region. (The picture supplement should be included in this exercise.)

19. New York.—Niagara Sheet, or Niagara Falls and Vicinity, U. S. G. S.: To study Niagara Falls and River.

20. Atmospheric Pressure: To determine whether the atmosphere exerts pressure.

21. Mercurial Barometer: To find some means of measuring the pressure of the atmosphere.

22. Conditions Affecting Evaporation: To learn the conditions affecting evaporation.

Effects of Evaporation: To learn how the temperature of an object is affected when a liquid evaporates from its surface.

23. Elementary exercise on Isotherms: To map and to study the average annual distribution of temperature in the United States.

24. Distribution of Temperature.

25. Rainfall in the United States: To map and study the average annual rainfall within the United States.

26. Seasonable Distribution of Rainfall: To plot and study the amount and distribution of rainfall throughout the year at different latitudes.

27. Section of Ocean Border—Continental Shelf: To show the widths of the continental shelf, the depths of water, and the slopes of the bottom.

28. New Jersey.—Atlantic City Sheet, U. S. G. S.: To study the sea border of a low growing plain.

29. Mains.—Boothbay Sheet, U. S. G. S.: To study the ocean border of a high rocky plain well dissected by rivers.

30. Winds and Currents: To study the relation of the ocean surface circulation to the planetary winds.

31. Rainfall and Vegetation: To study the distribution of rain over the earth, and the vegetation areas and belts depending on rainfall and temperature.

32. Experiments with Oxygen.

33. Experiments with Carbon Dioxide.

34. Experiments with Heat.

THE BIOLOGICAL SCIENCES

Two types of courses in biology are now to be found. One is what is known as the "blended" course, "in which animal and plant life are studied as a unit," while the other considers "plant-biology, animal-biology, and human-biology" under the separate heads of botany, zoology, and human physiology. (Quotations from Tex. Bul. 85, Feb. 15, 1919.)

Much can be said in favor of the point of view of those holding to both types, but inasmuch as the latter is more easily understood, is more nearly in conformity with the training of most teachers, and brings about a keener interest in plants and animals, as such, by their separate consideration it is thought best to have botany and zoology given as half year courses in the same school year, and human physiology either in the

grammar school or in the first year of the Junior-Senior high school.

BOTANY

The study of botany is important for the following reasons:

1. It is closely related to agriculture, zoology, horticulture and forestry.
2. It stimulates the pupil to close and accurate observation.
3. It affords to the student the pleasure of discovery.
4. It furnishes opportunity for worthy use of leisure.
5. It develops ethical character by giving broad conceptions of nature and of life.

The point of view with respect to the teaching of botany has changed materially within the space of a few years. From flower-analysis and the naming of flowers of a few years ago a type of course designed to study representative plants of the various orders was evolved; but the most recent type is the synthetic course. Each of these types of instruction has some value, but the synthetic perhaps most nearly approaches the ideal. Anatomy and morphology, plant physiology, and plant ecology, natural history of plant groups, and classification—all these phases of the subject are important—and it has truly been said that "a high school course in biology should comprehend the entire field of botanical study." (Tex. Bul. 85, Feb. 15, 1920.)

Class—Single standard period three times a week during half of the school year.

Laboratory—Double standard period twice a week during half of the school year.

In no branch of science is field and laboratory work more important than in botany.

The course of study given below is taken from Bulletin 85 of the Texas Department of Education, and is based upon a syllabus formulated by the Committee on Education of the Botanical Society of America. This syllabus was founded upon the two important reports of the National Education Association—the "Report of the Committee of Ten" and the "Report on College Entrance Requirements."

Course of Study

Part I. The General Principles of Anatomy and Morphology.

A. The cell.

1. Wall, cytoplasm, nucleus.
2. History of cell theory.
   a. Robert Hooke.
   b. Schleiden and Schwann.
   c. Dujardin, Von Mohl, and Schultze.
3. Reproduction.
   a. Fission.
   b. Mitosis.
4. Organs and tissues.

B. The parts of a flowering plant.

1. The seeds.
   (a) Four types (structure and homologous parts).
      (1) Dicotyledon without endosperm (e. g. lima bean).
      (2) Dicotyledon with endosperm (e. g. castor).
      (3) Monocotyledon (corn).
      (4) Gymnosperm (pine).
   (b) Food supply.
      Experimental determination of its nature and value.
   (c) Phenomena of germination and growth of embryo into a seedling—including bursting from the seed, assumption of position, and unfolding of parts.
2. The shoot.
   (a) Gross anatomy of a typical shoot.
      This should include the relationship of position of leaf, stem (and root), the arrangement of leaves and buds on the stem, and deviations (through light adjustments, etc.) from symmetry.
   (b) Buds, and the mode of origin of new leaf and stem.
   (c) Specialized and metamorphosed shoots.
   (d) General structure and distribution of the leading tissues of the shoot; annual growth; shedding of bark and leaves.
3. The root.
   (a) Gross anatomy of a typical root.
   (b) Position and origin of secondary roots.
   (c) Root hairs.
   (d) Specialized and metamorphosed roots.
   (e) General structure and distribution of the leading tissues of the root.
4. The flower.
   (a) Structure of a typical flower.
   (b) Comparative morphological study of several different types.

5. The fruit.
   (a) Structure of a typical fruit.
   (b) Comparative morphological study of several different types.

A comparative morphological study of flowers and fruits may be postponed to Part III and be studied in connection with the classification of the angiosperms. A more intensive study can be made at that time.

Part II. **Physiology of Plants.**

A. Role of water in the plant.
   1. Absorption and osmosis.
   2. Path of transport of water.
      Function of fibrovascular bundles.
   3. Transpiration and evaporation.
      Functions of stomates, lenticels, cuticle, corky tissue, etc.
   4. Turgidity and its mechanical value.

B. Photosynthesis.
   1. Value of light in chlorophyll production.
   2. Dependence of starch formation on chlorophyll.
   3. Dependence of starch formation on light.
   4. Dependence of starch formation upon carbon dioxide.
   5. Evolution of oxygen.
   6. Translocation of food.

C. Respiration.
   1. Evolution of carbon dioxide.
   2. Retention of oxygen.
   3. Function of retained oxygen.

D. Digestion and assimilation.
   Action of diastase.

E. Growth.
   1. Localization in roots and stems.
   2. Relationships to temperature.

F. Irritability.
   1. Geotropism.
   2. Heliotropism and phototropism.
   3. Hydrotropism.

G. Reproduction.
   1. Vegetative.
   2. Sexual.
      The subject of reproduction should be studied in Part III in connection with the study of group types.

It is not to be expected that the physiology be studied as a separate division of the course. The physiological processes can more profitably be studied in connection with the morphology of the plant structure in which the processes occur as they are given in Part I.

Part III. The Natural History of the Plant Groups, and Classification.

The student should be required to have a rather definite understanding of the great natural groups of plants. This can be acquired by a thorough study of the vegetative structure, reproduction and adaptations to habitat of one or more types from each of the lettered groups, supplemented at times by less intensive study of other forms in those groups. It is recommended that the general homologies from group to group be emphasized, to the end that the student will have a clear appreciation of the evolutionary progress of the plant kingdom. The origin and development of sex should receive careful attention, especially in the algae. The types marked by a star are recommended as minimum essentials.

A. Algae.
   1. Blue green algae—Oscillatoria or *Nostoc.
   2. Green algae—Pleurococcus; *Spirogyra; Hydrodictyon; *Vaucheria; Cladophora.
   3. Brown algae—*Fucus.
   4. Red algae—Nemalion or Polysiphonia.

B. Fungi.
   1. *Bacteria.
      (a) Forms.
      (b) Habitat and nutrition.
      (c) Locomotion.
      (d) Reproduction.
   2. *Yeasts—Commercial yeast.
   3. Molds—Rhizopus or *Mucor.
   4. White Rusts and Downy Mildews—Albrugia or Peronospora.
   5. Sac fungi—*Powdery mildew.
   6. Smuts—Tilletia or any species of *Ustilago (e. g. corn smut).
   7. Rusts—*Puccinia (wheat rust).
   8. Mushrooms—*Agaricus.

      The external symptoms of plant diseases should be studied in connection with the study of fungi. Stress economic phases.

C. *Lichens.

   Any species of the commoner forms will do for illustration. Study symbiosis.

D. Bryophytes.
   1. Liverworts—*Marchantia.
   2. Mosses—*Funaria or Mnium.

E. Pteridophytes.
   1. Ferns—*Any common fern. Study both the gametophytic and sporophytic generations.
   2. Fern allies—*Equisetum and Selaginella or Lycopodium.

F. Gymnosperms—*Pinus or equivalent.

G. Angiosperms.

A type of both a *monocotyl and a *dicotyl should be studied in order to establish their relationships with simpler forms. In addition to this, representative plants of the principal families of angiosperms should be studied and classified. The classification should include not only an elementary study of the principal subdivisions of the angiosperms but the classification of some eight or ten species of plants. The student should be acquainted with the commoner flowering plants, both herbs and trees, of his locality. However, it must be remembered that an extensive knowledge of the botanical names is not important—the common names being sufficient in most instances. For instance, if the student recognizes a nightshade, it is of no importance to him to know whether it is the solanum rostratum, solanum eleagnifolium or what not.

The preparation of an herbarium is not required nor recommended except as a voluntary work for those with a taste for collecting. If made, it should not represent so much a simple accumulation of species as some distinct idea of plant associations, or morphology, or of representation of the groups, etc.

Part IV. Ecology of Plants.

It is not intended that this part be studied as a separate division. On the contrary, the first four types (given below) should be studied along with the structures with which they are most closely related. However, plants in relation to their natural environment should be studied as extensively as time and conditions will permit. A great part of this work can be done out of doors—in fact it is essentially field work. A good plan is to assign each member of the class a certain area or plot, and have him make a study of the vegetation of this section. In the light of what he has learned earlier in the course, he should be able to assume a viewpoint that would enable him to appreciate and interpret the conditions found to prevail in his allotted section.

In Part II reactions to various stimuli, such as heliotropism and geotropism were cited. This subject can be further studied here, if convenient, as an adaptation to environment. The work that plants do in order to adapt themselves to their surroundings, and thus survive the struggle for existence, should be clearly understood by the pupils. The subject may have been adequately covered in Part II or elsewhere in the course,

but in case it has not it should be taken up here as a division of the course.

The following topics in ecology should receive consideration, either here or at convenient times during the course:

1. Modification of parts for special functions.
2. Dissemination.
3. Cross-pollination.
4. Light relations.
5. Zonal distribution.
6. Plant societies.
   a. Xerophytes.
   b. Hydrophytes.
   c. Mesophytes.
   d. Halophytes.
   e. Tropophytes.

ZOOLOGY

The reasons for the study of Zoology are similar to those advanced for studying botany. "Zoology properly taught is a highly educative subject, and at the same time an economical science. No subject offers better opportunity for accurate observation, clear description, correct analysis and discriminating thinking than zoology. Pupils are instinctively interested in animals, and this interest properly developed and stimulated will lead them to see both the beauty and the design in all created life."

Field work in zoology cannot be too highly emphasized. Animal life cannot be studied without coming in contact with living animals, and to discover the habitat of a given creature and know his habits and movements from personal observation is worth more to the pupil than all he can learn from books or from examination of a preserved specimen. The assignment to a pupil of a project to watch a caterpillar go through its various metamorphoses and report all he sees, or to study the life history of a mosquito will develop the scientific attitude, and will go a long way toward solving the question of interest in scientific studies.

Field work should of course be planned and directed by the teacher, and reports of such work given intelligently by the pupil at the class conference and afterward incorporated in his notebook.

Class—Single standard period three times per week during the half year.

Laboratory—Double standard period twice a week during the half year.

The class work should consist of lesson assignments on the regular text, lecture demonstrations, class conferences, and reports on special assignments. Several texts other than the adopted one should be accessible to the pupils, and other sources of information valuable as reference material should be collected by the teacher.

A good laboratory guide is found in the adopted text, but if other exercises are desired any standard manual may be followed. Accurate and neat notebooks must be kept.

As far as possible all specimens for laboratory work should be collected by the pupils. In a few cases preserved specimens will be necessary, and these can be secured from supply houses.

It may be desirable to study the internal structure of a few animals, but ordinarily the external features, and more particularly the movements and habits of live animals should receive more attention.

The course of study given below is that given in Bulletin 85, Texas Department of Education, Feb. 15, 1919. This outline is well adapted to the Florida textbook, and is here given in full.

Course of Study

I. Introduction.
   1. The meaning of zoology and its relation to other subjects.
   2. A brief survey of the animal kingdom.
   3. The cell.
      (a) A typical cell.
      (b) History of cell theory.
         a. Robert Hooke.
         b. Schleiden and Schwann.
         c. Dujardin, Von Mohl, and Schultze.
      (c) Reproduction.
         a. Fission.
         b. Mitosis.

II. Insects—4 to 6 weeks.
   1. Detail study of one form of local importance, as grasshopper, cricket, beetle, or a true bug. The grasshopper or locust is an especially good type. This study should comprehend the following viewpoints: external and internal structure; life history, physiology; habits; economic relations.
   2. Comparative study of the commoner forms in each of at least six orders. Protective coloration, habits, life history, external characters and economic problems rather than internal structure should receive chief consideration here.

III. Protozoa—1 to 2 weeks.
1. A microscopic study of two or three forms as amoeba, paramecium, euglena. Other forms may be substituted for these in case they are found more readily.
2. The sporazoa.
(a) Relation to disease production.
(b) Life cycle of malarial protozoan.

IV. Sponges—2 days.
1. Differentiation and division of labor.
2. Commercial uses.

V. Coelenterata.
1. Geographical and geological importances.
2. Alternation of generations.

VI. Worms.
Stress parasitism, making an especial study of human parasites.
1. Flatworms.
(a) Planarian.
(b) Liver-fluke.
(c) Tapeworm.
2. Roundworms.
(a) Vinegar-eel.
(b) Trichina.
(c) Guinea-worm.
(d) Hook-worm.
(e) Ascaris and pin-worm.
(f) Hair-worm.

VII. Echinoderma.
1. Starfish—radial symmetry.
The starfish is a good type for a study of embryology unless the textbook used gives it in connection with another form.

VIII. Annulata.
1. Earthworm.
Individual dissections and a thorough study of the anatomy, physiology and ecology are advised.

IX. Mollusca.
1. Detail study of fresh water mussel.
2. External morphology of other forms, as oyster, snail, squid, etc.
3. Button manufacture; pearl and oyster industries.

X. Crustacea.
1. Crayfish—structure, locomotion, protective adaptations, nutrition, reproduction.
2. Brief study of other crustacea as crab, barnacle, cyclops.

XI. Arachnida.
No internal anatomy is advised.
External features and economic relations of spiders, scorpions, "daddy-long-legs," mites, ticks.

XII. Myriapoda.

No dissection advised.

Brief study only of class as a whole.

XIII. Fishes.

1. Ancestry of vertebrates.
2. External morphology and adaptation to habitat.
3. Fish culture.
4. Fishes as game and food.

XIV. Amphibia.

1. Life history of frog as an illustration of the law of biogenesis.
2. Dissection of frog to show vertebrate anatomy. The frog is a good type for this purpose as it is easily obtained and is clean to handle.

XV. Reptiles.

Internal morphology is not important. Adaptations and general study of snakes, lizards, turtles, crocodiles, and alligators. Relation of reptiles to amphibia.

XVI. Birds.

1. Relation to reptiles.
2. External and internal morphology.
3. Adaptation to flight.
4. Economic importance.
5. Poultry culture.
6. Recognition of common forms (at least 15) and field observations on habits, nesting, protection, feeding, etc.

XVII. Mammals. (See Daugherty, Economic Zoology, Saunders Co., for a good study of mammals.)

The following classes should be studied from the viewpoint of natural history and relation to man. Any good text-book will give the essential information about each group.

1. Marsupials.
2. Edentates.
3. Cetaceans.
4. Ungulates.
5. Rodents.
6. Carnivorates.
7. Chiropterates.
8. Primates.

XVIII. Variation and heredity.

1. Evolution.
2. Heredity.
   (a) The physical basis of heredity.
   (b) Laws of Galton and Mendel.
3. Animal breeding and the improvement of existing varieties.
4. Eugenics.

HUMAN PHYSIOLOGY AND HYGIENE

This course is intended for a year's work in the first year of the Junior-Senior high school. The purpose of the course is to develop the pupil's regard for his body to the end that better health may result, and greater general efficiency be obtained.

For laboratory work a good manual should be secured and rather closely followed unless the teacher has had thorough training and experience in this subject.

Class—Single standard period three times per week for the school year.

Laboratory—Double standard period twice a week for the school year.

Inasmuch as Ritchie's *Human Physiology* is the adopted text in Florida the course outlined below, conforming to that text, is taken from Texas Bulletin 85, Department of Education, Feb. 15, 1919. This outline was adapted from the report of Principal G. J. Koons to the Illinois High School Conference, November, 1917.

Division (a) required; (b) advisable, but not required.

Course of Study

I. Introduction. One week.

(a) Importance of study. Scope and division of subject. Man's place in animal kingdom. Physiological division of labor. Relation of structure to function. Protoplasm. Cell structure and reproduction. Kinds of tissues. Ritchie, Chaps. I, II.

(b) Brief historical account. Demonstration of cell structure and reproduction with microscope or lantern. Demonstration of common tissues.

II. Supporting Tissues. Two weeks.

(a) 1. The human skeleton: Structure, Composition and growth of bones. Pupils should be able to name and identify on skeleton the important bones. Articulation. Importance of correct posture. Skeleton deformities and their causes. Ritchie, chaps. IV, V.

2. The muscular system: Kinds and structure of muscles. Exercise. Simple exercise for developing and keeping body in good condition. Ritchie, chap. VI.

(b) Demonstration with microscope slides of bone tissue and of different kinds of muscles. Training and development. Comparative value of different kinds of exercise.

III. **Foods.** One week.

(a) Necessity. Kinds. Sources of food supply. Composition and energy. Selection and preparation. Correct diets. The school lunch. Dangers in water and milk supplies. Ritchie, chaps. VII, X, appendix A.

(b) Composition of different kinds. Food charts. Simple methods of detecting adulterations. Safe methods of storing and preserving. Mistakes in diet. Is alcohol a food?

IV. **Digestion and Absorption.** Two weeks.

(a) Purpose of digestion. Structure and function of organs. The teeth. Oral hygiene. Secretion and action of digestive ferments. Digestion and absorption in the mouth. Importance of careful mastication. Digestion and absorption in the stomach. Digestion and absorption in the intestines. The pupil should be able to trace in a clear and accurate manner the food from the time it enters the mouth until it is built up into the tissues. Ritchie, chaps. VIII, IX.

(b) Demonstration of the viscera of a cat, rat, or rabbit. Swallowing. Causes of indigestion. Common diseases and disorders of the digestive organs. Intestinal parasites. Effect of alcohol on digestion and digestive organs. How to keep the digestive organs in good working order.

V. **The Blood and Its Circulation.** Two weeks.

(a) Composition of the blood. Structures and functions of different parts. Structure, adaptation and function of organs of circulation. Course of blood through the body. Lymph and lymphatic vessels. Ritchie, chap. XI.

(b) The malarial parasite and the blood. Demonstration of Beef's or Sheep's heart. Demonstration of capillary circulation in frog's foot, tadpole's tail or fish's tail. Cause of fainting. Influence of alcohol on the temperature of the body and the organs of circulation. Athletic heart. Headache remedies. So-called blood purifiers.

VI. **Respiration.** One week.

(a) Purpose. Necessity of oxygen. Structure, adaptation and function of organ of respiration. Breathing. Exchange of gases. Necessity of ventilation. Methods of ventilation. The sleeping room. Ritchie, chaps. XII, XIII.

(b) Respiration in lower animals. Demonstration of "plucks" secured from butcher shop. Lung capacity. Internal respiration. Artificial respiration and demonstration of methods. The lung motor. Dangers from breathing dust. Proper methods of sweeping and dusting. Outdoor sleeping. Drafts. Breathing exercises. Diseases of the organs of respiration, with special attention to colds and tuberculosis. Preventive measures.

VII. The Skin, and Elimination of Waste. One week.

(a) 1. Skin: Functions of the skin. Structure. Hair and nails. Action of clothing in retaining heat of the body. Bathing. Ritchie, chap. XV.

2. Kidneys: Structure and function of the kidneys. Effect of alcohol upon the kidneys. Ritchie, chap. XIV.

(b) Effect of overheated and underheated rooms on the skin. Effects of humidity. Cause of fever. Chills. Common skin diseases. Inflammation. Corns. Warts. Bunions. Moles. Blackheads. Pimples. Ingrowing nails.

VIII. The Nervous System. Three weeks.

(a) 1. Protected position. Parts. Structure and function of different parts. Sympathetic nervous system. Reflex action. Hygiene of nervous system. Rest. Play. Sleep. Principles of habit formation. Ritchie, chaps. III, XVI, XVII, XVIII.

2. Special senses. Structure and functions of the organs of the special senses. Proper light for reading. Lighting of homes and school rooms. Care of the eyes. Ritchie, chaps. XIX, XX.

(b) Tobacco, alcohol, and drug habits. Pain. Nervous disorders. Mental hygiene.

Demonstration of structure of eye with beef or hog's eye. Demonstration of structure of ear with model. Methods of testing hearing and sight. Defects of vision and how remedied. Trachoma.

IX. Accidents. One week.

(a) Importance of cool head and quick action in accidents and emergencies. What to do in case of drowning, asphyxiation by gas, freezing, sunstroke, broken limbs, bleeding, poisoning, sprains, burns. Ritchie, chap. XXI.

(b) The home medicine cabinet. What it should contain. Simple household remedies and their use. Proper care of the sick. The sick room. Food for the sick.

X. Home and Public Sanitation. Three weeks.

(a) 1. Organisms that cause diseases. Bacteria: Classes, characteristics, reproduction, conditions favorable to growth. How they get into the body. Diseases caused by bacteria. Protozoa: Characteristics, reproduction, conditions favorable to growth. Diseases caused by protozoa. Diseases caused by organisms other than bacteria and protozoa, as ringworm, hookworm, tapeworm. Ritchie, chaps. XXII, XXIII, XXIV, XXVI.

2. Hygienic and sanitary measures based on knowledge of parasites causing disease: food preservation, disinfection, vaccine and serum treatments, protection from and elimination of flies, mosquitoes, and other pests. Ritchie, chap. XXV.

3. Preventive measures and treatment of common diseases caused by parasites, with special attention to common communicable diseases.
4. Prevention of disease by the individual. Importance of cleanliness, fresh air, pure food, pure water, healthful exercise and sufficient sleep. Causes of lowered resistance. Co-operation with civic authorities.

(b) Prevention of disease by civic authorities. Care of the streets. Care of public places. Public water supply. Sewage and drainage. Sanitary inspections. Supervision of sale of milk and other foods. Quarantine regulations. Medical inspection of schools.

The subject of sex hygiene is left to the judgment and discretion of the teacher. Instruction in this subject is a delicate matter, and unless handled wisely and properly, is apt to do harm rather than good. In some high schools a woman physician is secured to talk to the girls and a man to the boys. This plan is a good one where the matter is attempted at all.

CHEMISTRY

This subject should ordinarily be placed in the third year of the four-year high school and be an elective in the last year or two of the Junior-Senior high school. In the smaller schools this subject should be alternated by years with physics, the two classes being combined.

Chemistry is not a subject surrounded by mystery, nor does it deal with the occult, but it is a science having to do with everyday life. No other subject deals with so many problems of home, farm, factory, and industry; and the teacher with the vision to connect up chemistry with the experiences and problems of his pupils has before him a large place of usefulness in our high school work. Chemical principles, however, should be established before practical applications are attempted. The committee on reorganization of science in secondary schools appointed by the National Education Association says, "Laws and theories should be approached through experimental data obtained in the laboratory and through applications with which the pupil is already familiar and in which he has a real interest."

Professor Twiss, in his *Science Teaching*, gives some "common sense rules and principles for teaching chemistry," which we quote from Texas Department of Education Bulletin 85, of Feb., 1919.

The above mentioned rules are as follows:

1. "Begin with facts of observation and experiment and stick closely to such facts throughout the course * * *"
2. "Withhold laws until a sufficient number of the facts and relations that are specific cases of the law have been studied and have become familiar. The law can then be appreciated as a device for the economy of thought."
3. "When a law has been once presented have the pupils connect the statement of the law with every specific case that comes under it, until they habitually do this for themselves."
4. "Withhold theories until they are needed to furnish explanations of observed facts * * *"
5. "If the students fail to understand a law or a theory when it is presented, do not insist on their memorizing it so they can repeat it glibly at once. Give time and more experience with concrete cases and after a while they will have learned it * * *"
6. "Laws and theories, therefore, should be introduced gradually as the course proceeds, and more difficult conceptions should come near the end of the course. * * *"
7. "The laws of chemistry should always be expressed in such language as clearly to imply that they are statements of the results of experiments. * * *"

No person who has had less than one year of college chemistry, preferably two, should attempt to teach this subject; and even with that amount of preparation, in addition, in the words of Prof. Schoch of the University of Texas, he should "Inform himself particularly upon the following subjects: soils, fertilizers, irrigation waters, feed and foodstuffs; the technology of petroleum oils, tar oils, cottonseed oil, linseed oil, the manufacture of soap, paint, and paper."

A course in general chemistry should be offered, and where possible other courses such as household chemistry and industrial chemistry should be given.

Class and laboratory work should be so closely connected by time and subject matter that the work of neither period will lag behind the other.

Excursions to factories and industrial plants where operations may be seen at first hand, if systematically planned and carried out, should prove highly beneficial. Notes must be taken on such observations and pupils required to make reports on various phases of the observed industries at the next meeting of the class.

Note books must be neatly and accurately kept, but the content rather than the form of book should be most con-

sidered in grading. The teacher should devise some plan to prevent students from using the work of others in getting up their note books. Lecture-table demonstrations by the teacher—assisted by selected students—may be incorporated in pupils' notebooks, but should be marked "Performed by the teacher."

Topics for investigation and report to the class conference should frequently be assigned.

Class—Standard single period three times per week during the school year.

Laboratory—Standard double period twice a week during the school year.

Thirty-six to fifty experiments should be performed during the school year. Some pupils can perform more than fifty, but no one should be allowed to perform less than thirty-six, and the teacher should then be sure that those performed conform to college entrance requirements. The laboratory manual which accompanies Brownlee and others' chemistry should be followed, but the work varied to meet local conditions.

The following outline of Brownlee, Fuller, Hancock, Sohon, and Whitsit's *Chemistry* was made by Mr. J. A. Cruikshank of the Gadsden County High School faculty.

Outline of Chemistry

(Based upon text by Brownlee, Fuller, Hancock, Sohon, and Whitsit)

I. Introduction.
   1. Physical change.
   2. Chemical change.
   3. Heating metals in air.
   4. Lavoisier's Experiment.
   5. Burning.
   6. Compounds and elements.
   7. Solids, liquids and gases.
   8. Identifying substances.

II. Gases and Their Measurement.
   1. Gas pressure.
   2. Effects of temperature and pressure changes on volumes of gases.
   3. Charles' Law.
   4. Use of Charles' Law.
   5. Boyle's Law.
   6. Use of Boyle's Law.
   7. Correction for temperature and pressure.
   8. Correction for difference in level.
   9. Correction for pressure of water vapor.

III. Oxygen.
   1. Preparation.
   2. Properties.
   3. Combustion.
   4. Slow oxidation.
   5. Kindling temperatures.
   6. Spontaneous combustion.
   7. Bunsen burner.
   8. Occurrence of oxygen.
   9. Relation of oxygen to life.
   10. Ozone.

IV. Hydrogen.
1. Preparation.
2. Action of metals on water.
3. Displacement in acids by metals.
4. Properties.

V. Composition of Water and Combining Weights.
1. Analysis and synthesis.
2. Synthesis by volume.
3. Synthesis by weight.
4. Law of Definite Proportions.
5. Combining weights.
6. Reacting weights.

VI. Water and Solution.
1. Properties.
2. Distillation.
3. Steam.
4. Ice.
5. Solution.
6. Saturation.
7. Relation of solubility to temperature.
8. Relation of solubility to pressure.
9. Freezing mixtures.
10. Supersaturation.
11. Crystals.
12. Water of crystallization.
13. Effloresence and deliquesence.
14. Hydrogen peroxide.
    a. Preparation.
    b. Properties.
    c. Uses.
15. Law of Multiple Proportions.

VII. Atoms and Molecules.
1. Law of Conservation of Mass.
2. Atomic Hypothesis.
3. Atoms.
4. Molecules.
5. Explanation of Law of Definite Proportions.
6. Explanation of Law Multiple Proportions.
7. Relation of reacting to atomic weights.
8. Value of atomic weight.

VIII. Chlorine.
1. Introductory statement.
2. Preparation.
3. Properties.
4. Uses.

IX. Hydrochloric Acid.
1. Preparation.
2. Properties.
3. Properties of acids.
4. Chlorides.
5. Tests for chlorides.
6. Uses of hydrochloric acid.
7. Proportion, volumetric composition, and relative composition of hydrogen in hydrochloric acid.

X. Molecular Composition.
1. Volume relation of gases.
2. Law of Gay-Lussac.
3. Reacting weights and volume weights of gases.
4. Avagadro's Hypothesis.
5. Number of molecules in gaseous elements.

XI. Atomic and Molecular Weights.
1. Atomic weights.
2. Density and specific gravity.
3. Specific gravity and vapor density of gases.
4. Determination of molecular weights.
5. Determining number of atoms in the molecule.

XII. Chemical Formulas and Names.
1. Significance of symbol.
2. Significance of formula.
3. Number of molecules.
4. Calculation of formulas.
    a. When vapor density is known.
    b. When molecular weight is not known.
    c. Percentage composition.
5. Valence.
6. Variations in valence.
7. Chemical names.
    a. Names of elements.
    b. Binary compounds.

c. Ternary compounds.
d. Acids and salts.

XIII. Chemical Equations.
1. Chemical reactions by equation.
2. How equation is written.
3. Equations for reactions already studied.

XIV. Chemical Calculations.
1. Reacting weight from equation.
2. Relative volume from equation.
3. Problems involving weight and measure.
4. Problems involving weight and volume.

XV. Sodium and Potassium.
1. Preparation of sodium.
2. Properties of sodium.
3. Chemical activity.
4. Action with water.
5. Uses.
6. Spectrum analysis.
7. Bases.
8. Preparation of potassium.
9. Properties of potassium.

XVI. Solution.
1. Conducting power of solution.
2. Electrolytes and non-electrolytes.
3. Dissolved salts and freezing point.
4. Osmotic pressure and relations.
5. Discussion of electrolytes.
6. Chemical activity of electrolytes.
7. Ions.
8. Explanation of Electrolysis.
9. Difference between ion and atom.
10. Ionization of acids and bases.
11. Neutralization.
12. Products of Neutralization.
13. Heat of neutralization.
14. Charges carried by ions.
15. Valence of ions.

XVII. Chemical Equilibrium.
1. Reversible reactions.
2. Dynamic equilibrium.
3. Reactions go to end.
4. Reactions that go to end through volatility.
5. Law of Mass Action.
6. Applications.

XVIII. Sodium and Potassium Compound.
1. General properties.
2. Preparation of hydroxides.
3. Properties and uses of hydroxides.
4. Sodium peroxide.
5. Sources of sodium chloride.
6. Manufacturing salt.
7. Potassium compounds.
8. Processes of making potassium compounds.

XIX. Sulphur and Sulphides.
1. Occurrence.
2. Extraction and preparation.
3. Forms.
4. Stability and properties.
5. Compounds.
a. Preparation.
b. Properties.
c. Uses.

XX. Oxides and Acids of Sulphur.
1. Sulphur dioxide.
a. Preparation.
b. Properties.
c. Uses.
2. Trioxide.
a. Preparation.
b. Properties.
c. Uses.
3. Sulphuric acid.
a. Preparation.
b. Properties.
c. Uses.

XXI. Nitrogen and Atmosphere.
1. Occurrence.
2. Preparation.
3. Properties.
4. Action with elements.
5. Uses.
6. Inert gases.

XXII. Nitrogen and Ammonia Compounds.
1. Ammonia.
a. Natural formation.
b. Preparation.
c. Properties.
d. Compounds.
(1) Preparation.
(2) Uses.

XXIII. Elements of Nitrogen Group.
1. General characteristics.
2. Phosphorus.
a. Kinds.
b. Occurrence.
c. Preparation.
d. Uses.
3. Arsenic.
a. Occurrence.
b. Properties.
c. Uses.
d. Compounds.
4. Antimony and bismuth.
a. Occurrence.
b. Properties
c. Uses.

XXIV. Halogens.
1. Bromine, chlorine, iodine and flourine.
a. Occurrence.
b. Properties.
c. Preparation.
d. Uses.

XXV. Carbon.
1. Unusual character.
2. Occurrence in nature.
3. Allotropic forms.
4. Properties.
5. Uses.

XXVI. Oxides of Carbon.
1. Carbon dioxide.
a. Occurrence.
b. Preparation.
c. Properties.
d. Hard water.
2. Carbon monoxide.

XXVII. Silicon and Boron.
1. Silicon.
a. Varieties.
b. Occurrence, properties, and uses.
2. Boron.
a. Occurrences, properties and uses.

XXVIII. Calcium and Compounds.
1. Calcium.
a. Occurrence, properties and uses.
b. Compounds.
(1) Preparation, nature, uses.

XXIX. Magnesium, Zinc, Mercury.
1. Occurrence and properties of each.
2. Preparation, uses.
3. Compounds.
4. Preparation of compounds.

XXX. Iron and Steel.
1. Occurrence of iron.
2. Deposits.
3. Smelting.
4. Cast iron.
5. Blast furnace.
6. Wrought iron.
7. Various kinds of steel.
8. Methods of refining and tempering different kinds of steel.
9. Classification.

XXXI. Compounds of Iron.
1. Pure iron.
2. Iron ions.
3. Compounds of iron.
a. Preparation.
b. Behavior.
c. Uses.

XXXII. Copper and Its Compounds.
1. Occurrence and ores.
2. Metallurgy.
3. Production of matter.
4. Refining processes.
5. Properties.
6. Uses.
7. Compounds.
a. Preparation.
b. Properties.
c. Uses.

XXXIII. Silver, Gold, Platinum.
1. Occurrence of each.
2. Metallurgy of each.
3. Photography.
4. Other uses of these metals and some of their compounds.

XXXIV. Aluminum and Its Compounds.
1. Occurrence.
2. Preparation.
3. Properties.
4. Uses.
5. Alloys.
6. Thermit Process.
7. Compounds and their preparation and uses.

XXXV. Tin and Lead.
1. History.
2. Metallurgy.
3. Properties.
4. Uses.
5. Compounds.

XXXVI. Chromium, Manganese, Conalt, and Nickel.
1. Occurrence, preparation and properties.
2. Compounds and study of their preparation and uses.

XXXVII. Periodic Law.
1. Early attempts at classification.
2. Periodic law.
3. Long and short periods.
4. Families and groups of elements.
5. Position of inert gases and hydrogen.
6. Significance of vacant spaces in table.
7. Value of periodic system.

XXXVIII. Industrial Carbon Compounds.
1. Organic chemistry.
2. Sources.
3. Destructive Distillation.
4. Illuminating gas.
5. Bone black.
6. Fractional distillation.
7. Fermentation.
8. Alcohol.
9. Vinegar.
10. Soap making.
11. Starch and sugar.

XXXIX. Classes of Carbon Compounds.
1. Structural formulas.
2. Hydrocarbons.
3. Paraffin series.
4. Olefine series.
5. Other series.
6. Methane.
7. Acetylene.
8. Benzene.
9. Substitute products.
10. Other compounds.
11. Reason for so many compounds.
13. Chloroform, formaldehyde, acids, etc.

XL. Radium and Radioactivity.
1. Discovery.
2. Nature of radioactivity.
3. Radioactive decay.
4. Series.
   a. Radium.
   b. Uranium.
   c. Thorium.
5. Value of radium.

PHYSICS

Physics is not surpassed by any other subject in its attractiveness, its utility, its power to create accurate habits of thinking, and its ability to connect up school with the home, the shop, the farm, and commercial activities. No other sci-

ence offers so many opportunities for use of the problem-project-conference plan of teaching, nor does any other give opportunity for association with the great minds of the world's advancement as does this subject.

It is now pretty generally conceded that physics should be taught in the last year of high school; and since it is given the best place in the curriculum the course should demand both accuracy and thoroughness.

Says the committee on reorganization of secondary science in its report to the National Education Association: "Physics, in common with other science courses in secondary education, should be directed as far as possible to the realization of . . . health, command of fundamental processes, worthy home membership, worthy use of leisure, vocation, citizenship, and ethical character."

The committee further says, "Among the habits and abilities which should be developed in all science teaching and which should be emphasized in physics instruction, the following may be enumerated:

(1) Observing accurately significant facts and phenomena, and at the same time neglecting distractions and details that have no direct relation to the problem in hand.
(2) Developing a methodical plan of attack before beginning an experiment or set of observations.
(3) Using eyes, ears, and hands before consulting books, when knowledge of phenomena is sought.
(4) Maintaining system, neatness, and order in the arrangement of apparatus and appliances for observational and experimental work.
(5) Using care and intelligence in manipulation of tools and apparatus, endeavoring to acquire a good technique.
(6) Making measurements where quantitative knowledge is required, always carefully, intelligently, and as accurately as is demanded by the nature of the knowledge sought, but not more so.
(7) Making and recording calculations accurately and rapidly, using practical aids in computation such as logarithms, multiplication tables, and the slide rule.
(8) Maintaining accuracy and methodical procedure in arranging and tabulating the data obtained from experiments and observations."

The purpose of laboratory work is not to "verify laws," "fix principles in mind," or to give "skill in making measurements," but, quoting again from the committee on reorganization, "the pupil should go to the laboratory to find out by experiment some facts that are essential to the solution of a

given problem, and that cannot be obtained at first hand by any other means."

Class—Single standard period three times per week during the school year.

Laboratory—Double standard period twice a week during the school year.

Thirty-six to fifty experiments should be performed during a school year. Some pupils can do more than others, so a minimum number of experiments should be required, but pupils encouraged to do more than the minimum if they can. Other exercises, as reports of excursions, field work, etc., should be recorded in the laboratory note book.

The following outline of Carhart and Chute's First Principles of Physics is given in the hope that it may be of use to some teachers.

General Outline of Physics

(Based upon Carhart & Chute's First Principles of Physics)

I. Introduction.
   1. Matter and energy.
   2. Properties of matter.
   3. Physical measurements.

II. Molecular Physics.
   1. Molecular motion.
   2. Surface phenomena.
   3. Molecular forces of solids.

III. Mechanics of Fluids.
   1. Pressure of fluids.
   2. Bodies immersed in fluids.
   3. Density and specific gravity.
   4. Pressure of the atmosphere.
   5. Compression and expansion of gases.
   6. Pneumatic appliances.

IV. Motion.
   1. Motion in straight lines.
   2. Curvilinear motion.
   3. Simple harmonic motion.

V. Mechanics of Solids.
   1. Measurement of Force.
   2. Composition of forces and velocities.
   3. Newton's Laws of Motion.
   4. Gravitation.
   5. Falling bodies.
   6. Centrifugal and centripetal force.
   7. The pendulum.

VI. Mechanical Work.
   1. Work and energy.
   2. Machines.

VII. Sound.
   1. Wave motion.
   2. Sound and its transmission.
   3. Velocity of sound.
   4. Reflection of sound.
   5. Resonance.
   6. Characteristics of musical sounds.
   7. Interference and beats.
   8. Musical scales.
   9. Vibration of strings.
   10. Vibration of air in pipes.
   11. Graphic and optical methods.

VIII. Light.
   1. Nature and transmission.
   2. Photometry.
   3. Reflection of light.
   4. Refraction of light.
   5. Lenses.
   6. Optical instruments.
   7. Dispersion.

8. Color.
9. Interference and diffraction.

IX. Heat.
1. Heat and temperature.
2. The Thermometer.
3. Expansion.
4. Measurement of heat.
5. Change of state.
6. Transmission of heat.
7. Work and heat.

X. Magnetism.
1. Magnets and magnetic action.
2. Nature of magnetism.
3. The magnetic field.
4. Terrestrial magnetism.

XI. Electrostatics.
1. Electrification.
2. Electrostatic induction.
3. Electrical distribution.
4. Electric potential and capacity.
5. Electrical machines.
6. Atmospheric electricity.

XII. Electric Currents.
1. Voltaic cells.
2. Electrolysis.
3. Ohms' Law and its application.
4. Heating effects of a current.
5. Magnetic properties of a current.
6. Electromagnets.
7. Measuring instruments.

XIII. Electromagnetic Induction.
1. Faraday's Law.
2. Self induction.
3. The induction coil.

XIV. Dynamo-Electric Machinery.
1. Direct current machines.
2. Alternators and transformers.
3. Electric lighting.
4. Electric telegraph.
5. The telephone.
6. Wireless telegraphy.

XV. Appendix.
1. Geometrical constructions.
2. Conversion table.
3. Mensuration rules.
4. Table of densities.
5. Geometrical construction to show refraction of light.

Mr. Fillers: I do not know that I have anything special to add except to say that General Science as taught today, is not generally well enough given to allow of credit toward graduation as the required Science in High School. I would give it for credit, yes, but not give it as the required science.

Mr. Workman: In looking over 20 or 30 college catalogues just out this year, I notice the absence of General Science and Physical Geography. Yale's catalogue, and several others, do not mention it among the subjects in which they would examine you; no mention is made of it in entrance examinations; nowhere is General Science mentioned in these catalogues. In most of the catalogues I have looked over, it was not mentioned even for credit, so that, while they might recommend it in the University of Florida, teachers usually regard it as a "joke" or a "filler."

Mr. Evans: We should possibly require some other science than General Science for high school graduation.

Mr. Fillers: Inasmuch as General Science is a comparatively new subject, no outline can be given, but we do have an outline to the present adopted textbook, Elhuff's General Science.

Mr. Draper: Is it not true that the N. E. A. Committee on Science recommended General Science for every high school, especially the small high schools?

Mr. Roemer: Yes. General Science is recommended in the first year of every type of high school.

Mr. Woodward: Do you make any mention of the kind of equipment that should be required for the laboratory?

Mr. Evans: We are working on that problem, but have not quite finished. Dr. Roemer is helping us out on that and we are not ready to report yet.

Mr. Roemer: Referring to the question of units, I find there is quite a discussion between state departments and university entrance committees on units. We should not allow these things to confuse us. I think you will find the state departments much more liberal than the universities. The fact that university entrance committees will not take it, in a way, recommends it to me. I do not think that should discourage us at all. I am for General Science.

Mr. Workman: Here is the course of study for Oregon. It does not mention General Science. Evansville, Indiana, gives ½ unit for Home Economics and ½ unit for General Science.

Mr. Cawthon: There seems to be a simple remedy, as there is in the case of many other studies. There are other subjects in the curriculum, and if the pupil is going to college, let him plan his course accordingly. He could decide early, in the first year or two, and if the college to which he is going will not take General Science, he can take Physics or Chemistry, if offered. That would be one way out of the difficulty. This is the case with Mathematics and other subjects, and it seems to be more and more emphasized now that high school pupils planning to go to college must figure on that.

Mr. Haynie: Why did he not outline a course in Agriculture?

Mr. Workman: That is a vocational subject.

Mr. Sealey: Are there any other questions you would like to ask Mr. Evans?

Mr. Metcalfe: As Agriculture is not incorporated in this report, would it be recognized as a science credit?

Mr. Sealey: You might ask if the University of Florida would accept it as a required science unit.

Mr. Roemer: The question was asked a while ago if commecrial training would come under Mr. Draper's Committee. That would come under vocational work, it seems to me.

Mr. Sealey: They are trying to saddle Agriculture on to you, Mr. Draper. It seems to me that we began the discussion in the midst of the report, so we will now continue.

Mr. Evans: I think that is the time to discuss these things, while they are fresh in our minds.

Mr. Sealey: Are there any other discussions or questions?

Mr. Haynie: How about Agriculture? Do they not teach Agriculture in some of the schools just purely as a science, as a natural science instead of a vocational subject?

Mr. Evans: I suspect the gentleman is right. I presume that this should come in the Junior and Senior High Schools, and if this Committee is continued, we will incorporate that in our next report.

Mr. Sealey: I understand the Committee is automatically continued. The Chairman would entertain a motion as to whether this Committee should continue the course in Agriculture as a Natural Science.

Mr. Frye: I make a motion that we do have this inserted.

Mr. Sealey: It is moved and seconded that the Committee on Natural Sciences include Agriculture as one of the subjects in the course which they are planning. All those in favor say "Aye," opposed, No." The motion is carried.

Mr. Evans: Of course there are other subjects, Zoology, Botany, Physics, Chemistry, Physiology, etc., all in this report. I do not want to weary you by reading these, but I would like to bring up the question about Biology as a subject or separating it into Zoology and Botany as we have done. Whether it should be taught as a separate subject or as a half year course in Botany and a half year course in Zoology, in the nine-month schools? I should like to hear this discussed.

Mr. Salley: I would like to say something about that matter of Biology vs. Zoology and Botany. I believe you will find that the best textbooks teach Biology rather than the two Sci-

ences separated. Just because we have been doing this way and have these two books, I do not think we should feel wedded to that practice. I believe the best and most modern practice everywhere is in the direction of teaching Biology as a unified science, rather than dividing it and teaching the two subjects Botany and Zoology. Just because we are not favored with a textbook, let us not feel that we could not combine them, because these textbooks would necessarily not always be in our way. With reference to General Science I would like to say a word. I am heartily in favor of General Science, and a whole unit of it too. The fact that some colleges do not take it for entrance credit should not alarm us in the least. I believe that Mr. Evans can determine better what the pupils in his school need than the College Entrance Board at Yale can determine. I do not think we should feel bound to follow their recommendations, although we could get suggestions from these boards.

Mr. Workman: It is not that I am opposed to General Science, but our experience in dealing with it in the last six or eight years is that the students are using it as a means of escape, and it is a farce with us, a "joke." We do not seem to get anything out of it and I am in hopes we can use something else in the place of it.

Mr. Evans: I cannot agree with the gentleman who has just spoken. General Science is a good science. It more nearly meets the needs of growing boys and girls than any other science we have, because there is the contact there between their interests and everyday surroundings, and that is developing not merely his needs, but it is also putting him in touch and contact with those vital things; and it is given to him in that formative period of his mind when it will make an impression. I believe there is no science that cannot be made extremely attractive if it is properly presented and taught. If the teacher will take hold of the subject, show its relation to everyday surroundings, make it vital and interesting, and not ask a few parrot-like questions with answers from the textbook, it will be worth while. The teacher who looks around him, uses the material at hand, takes advantage of civic conditions and awakens the pupil's interest in healthy reform in the community, such as combating the house-fly, the mosquito, contaminated water, shows the pupil its relations

to matters in the home, such as sewage disposal, electrical appliances, making it really worth while and a part of him, will find General Science the most useful science in the whole course, as well as the most fascinating. For the pupil who can have only one year of science, it is *the* science, and I hope nothing will be done by this body to discourage it, as it means the development of our pupils along scientific lines.

Mr. Metcalfe: I am not exactly at home in the discussion of Science, but I have a sympathy with Mr. Workman in what he said about pupils taking the line of least resistance. I think we are entirely too free with these "unlimited" electives. Then, too, I have great regard for what Mr. Evans says. When he comes to practical grounds, there may be a good deal to what he says, however, I do not like hash, I like roast beef. I think it expresses the point of view of quite a number of us who are accused of being cold and unsympathetic toward General Science, when I say that we doubt the wisdom of encouraging too much laziness.

Mr. Fillers: I read a paper here about a year ago, and about a half of it was on General Science. I do not advocate making it the required science for graduation. It may be that the time will come when it can be presented in a way and the material be organized and standardized to the point where it will be to the interest of all high schools and higher institutions of learning to give credit on graduation for it. I want credit for General Science, but to make it the required science, in other words, to require every student of the high school to take General Science, to my mind, is emphasizing it too much at the present time. It may be that after it becomes thoroughly standardized, the time will come when we shall make it the required science, but now I would not want all the students in my high school to take it. Most of our students are in the Latin department at the present time.

Mr. .....: I would not like to prolong the discussion, but I should like to know about the amount of time that should reasonably be expected to be given to the double laboratory periods in order that the course of every pupil be rounded out in the experiments which the high school offers. I find a difficulty in arranging a schedule of recitations at the beginning of the year in the ..... High School, with the teaching force, in providing for double laboratory

periods in all the sciences. There is bound to be overlapping unless we shift the pupil. He must take the General Science in the Freshman year, or perhaps any year that he can. Just how strictly are we called upon to interpret that double laboratory period and to insist upon it, I would like to know? I found in my high school in the Botany class that it was impossible to have a double period. It was impossible to do the work. I found my science teacher this year trying to do all the work in one period. I have discouraged that. I do not think the pupil should get full credit if carried on in that way. Some of the brighter pupils can cover all of the work.

Mr. .....: We have done all that and still have some of the morning General Science having to take half the laboratory period in the morning and half in the afternoon.

Mr. Fillers: We have four sciences and seven periods every day. Instead of having double periods every week, we have two double periods one week and one the next, and it works out very nicely. One day we will have Physics laboratory for two periods, and the last period a recitation in Chemistry; the next day we will have the first period recitation in Physics and the next two periods Chemistry in laboratory. We have no trouble at all. I alternate laboratory and recitations, instead of having two double periods a week, we have two double periods one week and three recitations and alternate the next, and it works out very nicely.

Mr. Woodward: Is General Science offered as an elective in each of the four years of high school?

Mr. Fillers: We give General Science through the Freshman and Sophomore years only.

Mr. Cawthon: I think the usual practice is, however, to offer General Science only in the first year.

Mr. Salley: I would like to say a word or two about General Science. One or two ideas have been suggested that I believe are worthy of careful consideration, and these two ideas, to my mind, are somewhat like Banquo's Ghost—they sit at every round table where we have discussions about these questions. First, is in regard to the rights of the students, which I conceive to be the great rights of our schools. The teacher has no rights except as he helps the pupil to realize his aim. The course of study, the grades, the curriculum, and the whole thing turns on the question, what is best

for the school? I believe we should not decry the course in General Science, but that we should make for more efficiency. The course in General Science is primarily to give the student general practical contact with many phases of life. That is the first essential, that he may have a feeling of at-homeness in any situation of life where he is called upon to go. To my mind, General Science should be so taught that it would prove a drawing card to hold pupils in school, to catch and hold them that they may become interested in taking it, and may be kept longer in school and perhaps get acquainted with and study more sciences later on. I may be in error, but I believe that the tendency, instead of strengthening the course in General Science, is to start other courses in other subjects, and these tendencies I believe, arise from the fact that we are not considering that question that is to be answered all the time: What is best for this student now, in this particular community? I am inclined to believe that these General Science courses, if they are conducted by highly trained, practical, scientific teachers, will not be "snap" courses. We need not allow them to be so, and I think there will be some "jokes" coming to students later on who take these courses as "snap" courses. At the State College for Women, we are building up our Demonstration School on the 6-3-3 plan, and we heartily believe in this course of General Science. There is another point in this connection, as to whether colleges and universities should be allowed to dictate to high schools what they shall offer. In Florida, we are going to have more freedom with increasing electives, otherwise, we will have a course that is not modern and progressive. To insure that, we must come back to the question of what is best here and now. Our courses should be so arranged that they satisfy the needs of today, and they will be improved for tomorrow. And if there is going to be any dictation as to what courses are offered, it is going to come from the high school, rather than from the universities and colleges. I believe there is a tendency on the part of the universities to extend a helping hand, and to recognize courses that meet the needs of the high school pupils as they see their needs. A step recently taken by the Florida State College for Women of adjusting ourselves to the needs of the growing communities of Florida will illustrate my point. A question came up to the Committee in the College of Arts

and Sciences as to whether we should accept more than two vocational units for entrance. That was voted upon. We do not accept more than two vocational units in the College of Arts and Sciences. Later on in the School of Education there arose the same question as to whether or not we should accept only two vocational units out of the sixteen. It was voted unanimously to accept four, and so now a student coming to the State College for Women can enter one of the Schools where four vocational units will be recognized. I believe the tendency is for us to have high school authorities find out what the people need, and then for us to meet you on your ground.

Mr. Workman: I would like to ask a question as to the credit for a year's course in Botany. There are some other schools or states that grant only ½ unit for half year's work in Botany. Some students from other high schools, however, one from Chicago, and one from some school in Texas this year, came to us claiming a whole year's course in Botany, stating that the course covered a whole year and was given for a year's credit.

Mr. Wilson: We should take units from other schools, providing they are worthy of acceptance, whether they come up to the Florida high schools or not. We shall have to practice that or else turn a great many people away that come to us.

Mr. Fillers: It is my idea of the high school that General Science should be given in the first year and General Biology in the second year, then Chemistry in the third year and Physics in the fourth year. It has been my pleasure to teach that general biology two years, and I can claim excellent results. I think one can get better results from these second year pupils than is possible to get from Freshmen in the high school. The fact is that a great many people are not prepared to teach Botany and Zoology as it should be taught, and they make it more or less general. It belongs, I believe, in the college or the university. The practical side is not emphasized sufficiently, I believe, in the high school, and that is too deep for students of that particular age.

Mr. McRee: Is there any other state except Florida that offers Botany and Zoology instead of Biology?

Mr. Frye: I believe Florida stands almost alone in this practice, as far as I am able to ascertain.

Mr. Workman: I would like to ask a question of Dr. Roemer. When you were talking about the decrease in registrants did you say in courses offered or registrants in these courses?

Mr. Roemer: I was talking about the decrease in the number of registrants. The reports of the United States Commissioner of Education show that from the years 1910 to 1915 the percentage of enrollment in high school Botany fell off 45 percent, and in high school Zoology, 59 percent. While I am on my feet I should like to have the privilege of discussing this a little further. I agree with Dean Salley that local needs should determine the high school curriculum and that the University in turn should be liberal enough to accept the units offered by these high schools. The consensus of opinion among the great group of modern educators is to the effect that General Science is the most valuable science to offer high school freshmen. This course not only meets local needs and prepares pupils for participation in modern living, but it also lays the broad foundation for later scientific study. The Committee on the Reorganization of Science for the high schools had this exact thing in mind when it published its bulletin, which is the most recent one from the press. A good many questions have been asked relative to the sequence of sciences in the high school. In this connection may I say that this bulletin works out this problem on several bases. It has worked out one course for the Junior high school; one course for the Senior high school; one course for the large cosmopolitan high school; one course for the medium-sized high school, and one course for the small high school. I believe that with a few minor exceptions, we can say that for Florida the best sequence of sciences would be (if we follow the spirit of this bulletin), General Science for the ninth grade, General Biology for the tenth grade and Physics and Chemistry for the eleventh and twelfth grades. Practice varies over the country as to what science is best in the eleventh and twelfth grades. Some state departments recommend Physics for the eleventh and Chemistry for the twelfth, while other state departments reverse the order. Personally, I feel that is a minor point in this connection, since either practice seems to give satisfactory results.

Mr. Workman: Has there been an increase in the curve in General Biology?

Mr. Roemer: Yes. Biology has come in each time to fill the place of Zoology and Botany.

Mr. Salley: It seems to me that this is an indication to all of us for the need of adjustment on the part of the schools. This information takes the place of any one man's opinion against another. It seems to me like the clear cut case of where the data gives us actual needs and shows how they are being supplied. The recognition of the value of General Biology as a basis for the much-discussed courses of Botany and Zoology is manifest. I believe if they are taught separately, they tend toward a violation of unity, and it is almost impossible to teach one without some bearing of the other upon it.

Mr. Sealey: This is a very interesting and helpful discussion, and I am sure we have all been benefited by it. We will now have to close the program. Are there announcements before we adjourn?

Mr. Cawthon: I just want to call the attention of the members again to the evening program, which will be held in the University Gymnasium. For the benefit of the new members let me say that the program consists of two parts tonight. The first part will be an address by Mrs. Lewis of Tallahassee, and the second part will consist of a debate on the Smith-Towner bill. This promises to be a very helpful program and all members are urged to attend.

Mr. Sealey: The Conference stands adjourned until 9 o'clock tomorrow.

FRIDAY, NINE A. M., APRIL 8th, 1921

Mr. Sealey: The Conference will come to order. Are there any announcements to be made at this time?

Mr. Cawthon: It is very encouraging to see several new faces in the audience this morning. I am trying to get a list of all the new people. Yesterday we passed a book through the audience with the request that all persons register. With your permission, Mr. Chairman, I am going to circulate this same notebook with the request that all new persons register at this time. At the end of the Conference we hope to have a complete register of every person in attendance.

Mr. Sealey: Is there any matter of business to come before us? I think we should have a Vice-President of this Association elected.

Mr. Roemer: We are going to adopt by-laws. Consequently I am placing in nomination Mr. Fillers for Vice-President.

Mr. Sealey: Are there any other nominations?

Mr. Sims: I move that the nominations close and that we elect Mr. Fillers by acclamation.

Mr. Sealey: All who favor this motion say "Aye." The motion is carried and Mr. Fillers is elected Vice-President. The first thing on the program this morning is the report of the Social Science Committee, of which I am Chairman. May I ask the newly elected Vice-President to take the Chair at this time.

Mr. Fillers (in the Chair): It gives me pleasure to present to this Conference one of the best known school men in our State. His long years of service and the efficiency with which he has presided at this Conference render any introductory words unnecessary. I therefore present to the Conference Mr. Sealey who will make the Report of the Committee on Social Science.

PRELIMINARY REPORT OF THE COMMITTEE ON THE SOCIAL STUDIES

By R. M. Sealey, Principal High School, Tallahassee, Fla.

Gentlemen:

Your Committee on the Social Studies begs leave to report that the time does not seem ripe for making definite recommendations concerning the course in the social studies. First among the reasons for this is the fact that the committee has not been organized and at work for a length of time sufficient to warrant the making of any recommendations which we should be willing to have considered as in any sense final. We feel that in dealing with a matter of such tremendous importance we should have at least a year of additional time in which to continue our study and investigation in order that our final report might be worthy of your most careful and deliberate consideration. A second and perhaps a more important reason for deferring this final report is to be found in the fact

that at the present time three very important committees are at work on the course in the social studies in high schools. These are the Committee on Patriotism thru Citizenship, established by the American Historical Association; the Committee on History and Social Science of the National Education Association; and the Committee on the Definition of History Units, appointed by the Association of Colleges and Secondary Schools of the Southern States. It is most important that we should await the completion of these reports so that we may study them carefully.

The last-named committee in a preliminary report made last December before the Association of Colleges and Secondary Schools of the Southern States has the following to say:

> "So rapid has been the recent development of certain new ideas with regard to history in the schools, that the plan of five years ago seems no longer to be worth discussing. Quite other schemes, some of them revolutionary, are now at issue. * * * Complete schemes of history teaching in schools have also been worked out by certain cities, among which the Philadelphia course is particularly to be reckoned with.
>
> "As there is great likelihood that a new scheme of school history will emerge from these discussions and become standard in the North and West, it is imperative that the South decide upon a definite attitude with regard to this important issue."

What is said here regarding history is equally true of the other social studies.

There is probably no group of studies in the program of the secondary school that is receiving so much thoughtful attention at this particular time as that of the social studies. When we consider the apparent trend of present-day events together with the definition of the social studies as formulated by the Committee on Social Studies of the Commission on the Reorganization of Secondary Education of the National Education Association we do not need to go further to find a reason for this. The committee states that, "the social studies are understood to be those whose subject matter relates directly to the organization and development of human society, and to man as a member of social groups." Since the great questions of the day are in so many instances primarily social questions there is every reason why the closest thought should be given to this matter of the social studies in secondary edu-

cation. There is probably no question that confronts the high school today that is of so much importance as is the question of citizenship training. Certainly all of the subjects in the high school curriculum should make a very definite contribution toward this end in the life of every pupil.

As a basis for discussion which will prove to be invaluable to your committee we wish to present for your consideration and discussion the "Program for Citizenship Training," appended herewith, as sent out recently by the *Literary Digest.* It is to be distinctly understood that this is not at this time presented with any recommendation from the committee, but simply as a basis for discussion and as a starting point for further study. We believe that it is sufficiently representative of the best thought and practice to warrant this.

While this proposed program seems to presuppose the six-three-three plan of organization there seems to be no good reason why it should not also be viewed as well from the standpoint of the eight-four plan of organization altho it would almost certainly be a more valuable course if taught under the six-three-three plan. In considering this course it seems well to the committee that we should presuppose in the sixth grade a course in European history with emphasis on American origins.

The program presented herewith does not differ radically from the program as outlined by the Committee on Social Studies, nor does it differ greatly from the Philadelphia plan, as mentioned above.

Your committee not only invites your full and free discussion on the floor of the Conference, but we urge that criticisms and suggestions be sent to us at any time thru the mails. With your hearty co-operation we shall hope to do some work that may be worth while.

A PROGRAM FOR CITIZENSHIP TRAINING

For the Junior and Senior High Schools

After a careful study of the Report of the Committee on Social Studies of the Commission on the Reorganization of Secondary Education, together with conversations with hundreds of history teachers, principals, and superintendents in every section of the United States, the following suggestions

are offered as representing the most progressive thought and practice:

Seventh Year

American History.....3 periods a week for a year

Recent experiences have shown the necessity of constantly referring to European history. The teacher of seventh and eighth grade history should point out in an elemental way how each step in our history has been related to the progress of the world. The geography of each country should be reviewed as it is referred to in the history study.

Introduction to Community Civics.....1 period a week for a year

Current Events .....1 period a week for a year

Eighth Year

American History, with incidental reference to Geography .....3 periods a week for a year

Community Civics .....1 period a week for a year

Current Events .....1 period a week for a year

The purpose of teaching current events in the seventh and eighth year is threefold. First to furnish a point of contact between the past and the present in the study of History; second, to broaden out the scope of Community Civics by bringing the pupil into contact with national and world affairs; third, to give those pupils who are shortly to leave school some knowledge of and an interest in the great national issues.

Ninth Year

Community Civics, with particular emphasis on State, National, and World Affairs....4 periods a week for a year

During the second half of the term, special emphasis should be laid on the social, economic, and vocational aspects of Civics. Every opportunity should be used to show the historical background of each phase of the subject.

Current Events .....1 period a week for a year

Problems of the day furnish an excellent means of illustrating and reviewing the civics text, of teaching the pupils to analyze intelligently the events of the day, and of emphasizing the privileges and responsibilities of citizenship.

Tenth Year

European History .....4 periods a week for a year

This would include about five to ten weeks devoted to the study of ancient, medieval, and oriental civilization to approximately the end of the Seventeenth Century. The remainder of the year would be devoted to a study of the more important periods—the Eighteenth, Nineteenth, and Twentieth Centuries.

Current Events .....1 period a week for a year

Up-to-date material because of its practical value, stimulates interest, shows the relation of American and European affairs, provides some study of the important Asiatic countries, and gives drill

in comparing and contrasting the present and the past. The Report of the Committee of Eight of the National Historical Association says: "Educators are generally agreed that the war taught us that recent and contemporary history are an indispensable part of our history course."

Eleventh Year

American History Since the Seventeenth Century ..... 4 periods a week for a year

This course reviews in a very few recitations the early history of our country, then centralizes on a study of the development of the ideals, principles, and institutions which are the foundation of our national life. The so-called problem method is recommended for this course.

Current Problems ..... 1 period a week for a year

A study of important recent movements tends to bring the student's knowledge up to date, enables him to see the present trend of social and economic forces, and to compare them with similar movements that occurred at earlier periods in our history.

Twelfth Year

Problems of American Democracy ..... 4 periods a week for a year

or

Economics ..... 4 periods a week for a half year

Sociology ..... 4 periods a week for a half year

"The Committee on Social Studies has recommended the study of 'Problems of American Democracy,' Economic, Social, Political, as a culminating course of social study in the last year of high school, with the purpose of giving a more definite, comprehensive, and deeper knowledge of some of the vital problems of social life, and thus of securing a more intelligent and active citizenship."

Current Problems ..... 1 period a week for a year

A problem course necessitates an intensive and detailed study of a few of the very important questions such as labor, transportation, foreign affairs, and the like. The student thereby frequently forgets the relation of his problem to other movements of our national life. A discussion for one period a week broadens his viewpoint, and invites him to look at matters from the standpoint of the whole.

Mr. Sealey (in the Chair): Do not feel that you will wound our feelings because we have not said that we believe any of these things are perfect. We need to differ here. Remember what Dean Norman said yesterday morning, and let us have some wholesome new ideas introduced by means of disagreement.

Mr. Fillers: I believe the subject of History is important enough that we should more or less all of us enter into some kind of discussion about it. It has been a question in my mind for some time as to whether Current Events one period a week

has been time well spent. I think that course depends largely upon the teacher, and upon the class, and, consequently, I have seen it abused. I think that World History, a course that would cover the history of all nations, for entrance, would be good. I do not know, just as Mr. Sealey said, what kind of a textbook, if any, has been written on that, but I think it should be a standard text. When I studied History, the first course was called General History, but it seems that the schools are getting away from that today. I believe, however, that it was a thoroughly good course for beginning History.

Mr. Sealey: The discussion is open, and we would like to hear from anyone.

Mr. Norman: I will start the discussion with regard to what you say there about World History. It is true that at one time there was a General History, but we got away from that and I am not sure but that there is some tendency toward what we may consider a General Social Science. The basis for this is going to be the present, with the past for a background and to explain the conditions of the present; but the emphasis is going to be on the present. The point of departure is to be in the present, and may never get any farther than that, but the starting point should be the present, with these problems, and then go as far back into the history of the world as you want to for explanation and helps that throw some light upon the problem. If I were teaching History, I would teach Current Events, and I would not hesitate to go back into Ancient History and American History, and I believe History teachers are coming somewhat to that point of view. I refer you to an article that was written by Mr. Hatch of the Horace Mann School of New York on this subject. It is one of the best outlines that I have seen or know anything about, showing what can be done with this subject of General Social Science. It appeared in the Teachers College Record for the month of December or January last.

Mr. Sealey: What year is the course in General Social Science for?

Mr. Fillers: That course in General History was suggested for the ninth grade.

Mr. Norman: What I was talking about would even go back to the seventh grade, and would be in the last year of the senior high school. It would begin with the seventh grade

and there the students would be studying about their present conditions, their present problems, their present history, etc. Mr. Hatch started in the fall of 1919 with the Irish problem; he had his students investigating the magazines, newspapers, and everything else from which they could get anything bearing on the Irish question, and he found that when they started that question, they had to go back into English History and come down so that they could understand the relation. They followed the argument wherever it led.

Mr. Workman: How about it if they had no library? This might work all right in the city, but in the country, if you had not a sufficient number of books, you would be handicapped, it seems to me.

Mr. Norman: Some of our high schools in this state are beginning to do this. It might be that in some schools you could do nothing more than take Myer's General History, and if the students study, you could accomplish a great deal. If in addition you could have a few books of reference, and have your magazines and newspapers, much could be done. Of course, if you do not have *any* library, you will have to teach from textbooks.

Mr. Workman: I would like to ask Mr. Sealey: I think this is a fine outline, but I wonder how that could be used with the three- and four-year high schools; how well it would work? The course of study is for seventy-five percent, three- or four-year schools. I wonder how it would work in the ordinary small school?

Mr. Sealey: It seems to me it would work. Of course they would miss something by being in the school with the shorter course.

Mr. Workman: Would there be sufficient material for reference work? Would it make any difference in the training of teachers?

Mr. Sealey: Not necessarily. The more resources for reference, the better the course would be.

Mr. Bristol: I came this morning at the special invitation of the Dean and Dr. Roemer as they felt that it might be advantageous to the principals to get the reaction of the Department of Sociology and Economics of the University to the plan of teaching the social sciences in the high schools. Now I have some very positive convictions with reference to

the teaching of Economics in the high school. I do not believe Economics as an abstract science can be taught there satisfactorily; and my chief reason for believing this is from my own experience. I do not believe Economics can be taught anywhere satisfactorily at the present time. In the first place, there is no textbook adapted for use in high schools covering the whole subject. If I had time, I could give you some illustrations of the difficulties of teaching Economics, but the fact is that it is in a transition stage at the present time. Authorities are not agreed as to the definition of some of the fundamental concepts as *Wealth, Utility, Value,* and *the Law of diminishing returns.* Now with such disagreement among authorities, and with the general lack of training on the part of pupils in abstract thinking, it does not seem to me wise to try to teach the subject in the high school. I think, however, there is a place for a general Social Science course, dealing with concrete problems and conditions, and largely of a descriptive character. This general Social Science course would correspond in a general way to the General Science course proposed for the ninth grade and to the general course in Biology for the tenth or eleventh grades, which seems to be displacing the separate courses in Botany and Zoology.

With reference to Current Events, I have been in schools and have visited classes where this was taught, but there is this difficulty: When you discuss one of these different events or conditions, the question arises, what should we do about it, and very few high school teachers even are qualified to give an intelligent answer. Now an intelligent answer can come only through a knowledge of certain general, fundamental principles, and it is of special importance that the pupils get hold of some of these fundamental principles before they leave high school, if possible, particularly if they do not go on to college and take there a liberal course. It is not easy to talk intelligently about crime and punishment, about poverty, its causes and methods of relief and prevention. Few of our newspaper editors are able to do so. It is very easy to talk about personal rights, but a study of social science shows us that there is no such thing as personal rights apart from the good of society. What do we mean by personal rights? What is the basis of our judgment? "A little knowledge," we are told, "is a dangerous thing." The plea of personal rights is

usually the cry of those individuals and groups who want something they do not now possess and take this method of winning public favor. The Social Sciences are related to all the other sciences, especially psychology and biology, and if the high school pupil can get a grounding in these, indeed if he can really grasp the principle of growth and development as revealed in the study of general Biology, a great deal will have been gained. Much has been said about History as a prerequisite for Sociology and Economics. We are told that it is impossible to understand the present except in the light of the past, but the reverse is equally true, that we cannot correctly understand the past except in the light of principles now at work, which we may study at first hand.

Ethics has been mentioned and the need of the study in the high school. I do not believe the time is ripe for a study of formal Ethics in the high school. Some principles can be taught, but these can be brought in incidentally in connection with the teaching of other subjects. The principle that, "We learn by doing," is preeminently true of conduct. Social life from cradle to grave—in the home, in the neighborhood, on the school ground—must be so organized as to tend to produce the socialized, hence moral, person. There is one task that stands out preeminent for you principals with reference to preparing the pupils to take up the Social Sciences in College, or to take up any other subject, and that is to train them to think. Of course, we do have some come here who have learned to think, to get down to the bottom of a subject, but the number is small, and if a general course in Social Science can be worked out which will assist the pupils to think intelligently, to get down to some rock-bottom principles, to take a concrete subject and look all around it and through it and under it, such a course will form the best possible preparation for the work the pupil will take up in college, or in life, if he does not go further in his formal training.

Mr. Roemer: Where would you place this course in General Social Science, in the upper part of the high school or in the lower part?

Mr. Bristol: I would not put it below the twelfth grade. I would try to provide a background for such a course in General Science and General Biology, with possibly some psy-

chology. I believe this General Social Science Course should be the climax of the whole curriculum.

Mr. Roemer: Would not most of the subject matter covered come more nearly in what we teach today in Sociology in the high school than in any other course?

Mr. Bristol: I think it would and there are several textbooks now that are fairly satisfactory for such a general course. The book by Burch and Patterson, entitled "American Social Problems," furnishes a very good outline, but needs to be supplemented by a good deal of other reading. Elwood's "Sociology and Modern Social Problems" is excellent, but the first three chapters are not adapted to use in the high school, unless the pupils have had Biology and possibly some Psychology. Bogardus' "Outlines of Sociology" furnishes an excellent syllabus and problems. Dow's "Introduction to Sociology" might also be found available. A recent book by Marshall and Lyon entitled, "Our Economic Organization" is the only book in the general field of Economics that I could recommend, and this, I believe, would prove to be very satisfactory. It has the further advantage of having references to a book of selected readings, "Readings in Industrial Society," by Marshall, which obviates the need of a large library. It also has references to pamphlets published by the Bureau of Education at Washington.

Mr. Wilson: Would you make this course a unit or a half unit course?

Mr. Bristol: There is sufficient material for a full unit course, especially in the use of Burch and Patterson with collateral reading. But I believe this could be used one semester and Marshall and Lyon a second semester, or they could be given in alternate years.

Mr. Fillers: Where would you place American History?

Mr. Bristol: This is out of my field and I would refer you to someone else.

Mr. Sealey: We are using now Burch and Patterson in our second semester in the twelfth grade. This is the second year we have used it. We do not guarantee that we can send you any students who can think, but they certainly seem to like the course. The teacher is very enthusiastic over it and the students certainly seem to like it. We use it four days of the week and current problems on the fifth day.

Mr. Cawthon: I would like to call the attention of those interested in History to the New York Syllabus. I do not say that I endorse it, but I commend it to you for study. This New York Syllabus can be obtained from the State Department of Education at Albany. I recommend that you write for it if you have not already done so. I obtained a few copies for the Committee on Social Sciences. It gives a sketch of the work of the Committee of Seven and also an account of what the Committee of Five has done. The general plan makes provision for a three-year course in World History, and also for a two-year course in World History. The former is designated as a Major Sequence and the latter as a Minor Sequence.

Mr. Roemer: It might be of interest to the men here to know that we have out of the ninety-eight four-year high schools of the State, eleven offering work in Sociology and four offering work in Economics as regular organized half units in the high school. I am going to take issue with Dr. Bristol in one way and I am going to agree with him in another. I endorse his words on Sociology, because I believe he is correct, but I believe we shall live to see the day when Economics also can be successfully taught in the high school. If you can teach the abstract principles of trigonometry, you can also teach the elementary principles of Economics; one is no more abstract or difficult than the other. I am going to live to see that day come around. It is the tendency of the times. For example, take the North-Central Association. They have recognized this fact. The great leaders of the high schools and universities of that Association are out in the free open air of modern education and allow the tendencies of the day to find expression in their schools. In this connection may I quote a paragraph from the latest bulletin of the North-Central Association? It says:

"Table 90 shows the offerings in economics. It is, perhaps, surprising to most persons to learn that nearly half of the schools in the association include this subject in their program of studies. Thirty-nine, or 3.77 percent, offer the study for an entire year; 455, or 44.08 percent, offer it for one-half year; while 538, or 52.13 percent, omit it altogether. Every school in Iowa offers a course in the subject, and more than half of the schools in Colorado, Illinois, Minnesota, Missouri, Montana, and Wisconsin make some provision for it. On the other

hand, a relatively small number of schools do so in Indiana, Michigan, Nebraska, and New Mexico."*

Thus you see nearly one-half of all of their high schools (numbering 1,165 in all) are actually teaching Economics and some of them are actually teaching Sociology. It is being taught and it is growing; in fact it is the growing spirit being manifested all over the United States. General Science has been under fire for a number of years, but the universities are giving in and are taking it for entrance units from high schools. The University is bound to come to this point of view. It is also going to come to the same point of view regarding Economics and Sociology. We already have some very good textbooks in the field for use and more will soon appear. I remember when General Science first appeared textbooks were few and poor; today we have around thirty standard textbooks on General Science. I am going to prophesy that in ten years we shall have a number of standard textbooks in Sociology. In developing this subject we shall make mistakes of course, we cannot walk perfectly at once. The spirit of these subjects is in keeping with the spirit of the report which Mr. Sealey has made for his Committee. I want to endorse that report whole heartedly. We speak of the age that is just past as the great scientific age. We speak of the present as the age of electricity; we are coming now to what is going to be known some day as the Social Age. The Social Sciences are destined to become the core of the high school and personally I do not see how we can justly deny Sociology and Economics their rightful places in the high school curriculum.

Looking at our high school curriculum from this view point, it is very unsocial or nonsocial. Especially is this true if we consider the one- and two-year high schools. These sixty small high schools on these charts here all conform to one type; they are merely the skeleton of a real high school. If you will notice carefully you will see that all of them have the same course of study in the Freshman year, namely, Ancient History, Latin, Algebra, and formal English. It is useless to condemn any one school. They are victims of a sys-

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"*The Accredited Secondary Schools of the North Central Association" Bulletin, 1919, No. 45, U. S. Bureau of Education, by C. O. Davis.

tem; condemn the system and reorganize it on the right basis. The solution is to go back to Mr. Sealey's statement; that is, take our ambitious one-, two- and three-year high schools offering a maximum of fifteen units and having one man or one woman doing all of the work and change that situation. If you can reorganize these schools and make them good, strong junior high schools of the modern type, we can then have a real junior high school in every county, or a number in every county, with at least one standard senior high school. The conditions over the State vary. Volusia County, for example, has five strong four-year high schools. It has five towns scattered over the county where the boys and girls can be transferred and get a good four-year high school education. Duval County on the other hand has only one senior high school and no other high schools of any type in the county. That county needs some good junior high schools distributed over it at strategic points. In advocating these junior high schools, please do not misunderstand the meaning of my term. I do not mean in any sense the present 2-year high school which goes under the caption of a junior high school. I believe in junior high schools, but I believe in the right kind of junior high schools. If the proper kind of junior high schools are established, they can do one year's work of a good strong nature as they do in many other states and then transfer their graduates to the centrally located senior high school where the upper work can be completed. In case the student does not finish his high school education, he has some very valuable knowledge at his disposal. If he does choose to continue his high school work he may do so, eventually entering the University without any handicap.

Mr. Evans: I do not want to be considered reactionary, but I do not know what to think about state adopted textbooks. We have some good ones and we have some very bad ones, but we have state adoption and we have a number of textbooks adopted by law. We shall be violating the law if we do not use them. Let us not put in Economics and Sociology textbooks which are not mentioned in the law. If they are using textbooks for these studies in the schools now, they are going against the law. It may be that the law is wrong, but as long as we call ourselves law-abiding citizens, we had better follow the law until we can change it. Let us change the law if it

is wrong, but let us not over-ride the law and teach the children of the land that the law is not to be respected.

Mr. Sealey: I cannot see where we are violating the spirit or letter of the law in teaching a subject not mentioned. I should think in teaching a subject not mentioned by the law, the school could adopt its own text, and I certainly do not believe we have violated any law if we teach Economics or Sociology, and if we are, why then, it feels good to be a Bolshevik.

Mr. Bristol: I heartily agree with Doctor Roemer. My only question was whether Economics could be taught as a separate subject. My position was for a general Social Science course, not using either of the terms, introducing all the Economics you can satisfactorily, but not labeling it Economics. Let me give you a concrete example. I had a student who thought he knew all about it. He came to me the second semester of this year. We are using Taussig. He had passed up a semester's work in elementary economics. This second semester I am trying to get them to think on concrete problems, and this student is at least an average student. I gave them four concrete problems such as we had been taking up in class. That student got 30. He said, "I simply cannot do anything with these problems." Now, if you are studying economics and cannot apply these principles, there is something decidedly wrong. Now again, Carver is used in a good many high schools. The first part is exceedingly easy, but the last part is hard even for a college junior. I am very fond of Professor Carver. I worked with him and assisted him. I do not believe, however, that his textbook can be successfully taught in high schools. My position is this: Let us have a General Social Science course, but not label it either sociology or economics, but put everything in it that the teacher is qualified to put in.

Mr. Workman: There is great danger of our being termed reactionary. We say, "Teach a general Social Science course," but we shirk the question as to the violation of the law. The question as to the textbook for this course is paramount now. Let us change the law so that Mr. Sheats and others can authoritatively give us a little freedom in the selection of textbooks. We want to reason this question out and while it is being discussed I would ask why not take it up with Mr.

Sheats and the Legislature and have the law changed so that we can have more elasticity in the selection of texts? We do not know the name of any textbook except the one we are using. There is no use in thinking any more unless we can loosen up; unless this body can go on record and get a little more breathing space, it had as well quit. You will violate the law, Mr. Sealey, unless Mr. Evans keeps you straight.

Mr. Wilson: I heartily agree with Mr. Roemer. I think we should revise the present plan of teaching History in the high school. I think it is absurd to teach history up to the time of Charlemagne and omit all else from that time on and then go back to what they have had in the eighth grade. I think we should change the Ancient History course to Modern History. If we have to use the same text for this particular course, get them to use the Modern History instead of the Ancient History.

Mr. Frye: I think we should heartily endorse what Dr. Roemer has said in regard to making out a course of study that would either fit a junior or senior high school. Being a member of one of these committees, it is a problem that has concerned me, and I think other members of our committee, as to just how to make this course. What little experience I have had in working in the public schools of Florida, meeting Boards and County Superintendents, I find that they are having the same trouble in their local communities from various places throughout the state where they want a two- or three-year high school course, as we are here. Just where and what to give, is their problem, too. I think we should heartily endorse this and take it up with our Boards of Education who are in need of it, that we do reorganize these schools, such as we can, and give a definite course of study that will fit a junior or senior high school. Permit me to go back just a little to the History course that we are to give in the high schools. I do not know yet that anyone has definitely started working on such a course, and what we should include in it. The Committee has given this a little thought; we purpose to give it more. What little time we have given to it, we have discovered that it is a great big problem that cannot be worked out in a day, a week, or a month. It is going to take time. I heartily endorse what the speaker has said in regard to the teaching of Sociology and Economics in the high school at

the present time. I do not think that at present it can be successfully done, and the reason why I say this is because we have not laid the proper foundation back in the lower grades for the social studies. The reorganization, I think, is going to come. We are looking forward to this 6-3-3 plan with great hopes that it will solve the problem in our state in the junior high school by beginning, as it does, at the seventh grade, and giving the proper course, and preparing the children for the social work in the senior high school. Begin by giving the background for American History, which would be European History, in the seventh grade, and then along with that have one recitation each day, five periods a week in Community Civics. Take up the history of the European countries and give specific attention to social problems, industrial problems, and all of the other problems that go to complete citizenship training. Then we shall have our children prepared for the work. Coming to the eighth grade, we should prepare them to take up United States History with this background; also the present day history and community civics; following that with History for three periods a week and two of civics throughout the year. When this is done, we shall be prepared to take these courses of Economics and Sociology in a more profitable and successful way.

Mr. Corr: Pardon me if I digress a moment from the point under discussion and say a word in regard to a question raised two or three times. I do not suppose there are today half a dozen teachers in Florida who were teaching when I commenced. I have been a Florida teacher for over thirty years. I was in charge of what was at that time one of the largest high schools in the State, and received one of the best salaries in the State—the munificent sum of $90.00 per month. I have seen changes; I have seen progress, and on some things no progress, fellow teachers. Let us make haste slowly, in some things let us not get away from the basic and foundation principles of education, and let us hark back to these. I opine one reason why there is such a demand for change from the State is because there are so few of our teachers really prepared to teach Latin, English, French and Spanish as it should be taught. I know what I am speaking of. As a prominent teacher said some years ago, "Something is lacking somewhere." And that is what I want to say now. None of

you know how happy I was to enter this gathering this morning, and to be a member of a body for which I have hungered for more than thirty years, a teachers' gathering, and not a conglomeration. My friends, in our Florida Education Association I have asked this question more than once, but have had no response, "Is it not time that the teachers of Florida were organizing in a State Teachers' Association?" We will get the reforms to which allusion has been made when we cease to be a part of a conglomeration domineered over by the politicians, and, fellow teachers, we will not get them until that time. Here is a county superintendent who is putting up his fences for next time; he is very careful to see that no teacher from his county will say anything that endangers his chances back at home and break down a single rail in his fence. Now one other thing. A bombshell was thrown into the camp two or three days ago by our friend Hathaway of Jacksonville. He issued a strong statement and now we can smell sulphur and brimstone in the air. How are we to use the adopted textbooks when the publishers who have contracted to furnish them will not furnish them? What are we going to do? This five-year adoption was nothing in the world but a political move. Certain politicians in the state wanted some campaign plunder and they started out and went to Georgia and some other states and brought down their inferior texts and presuming upon the ignorance of the people in Florida schools, brought down inferior books and said you have got to pay so much for them. I have handled paper for all kinds of printing and have handled it for years, and know there was a game of politics involved. Let us have a state teachers' association like some of the other states have and when we have that, our committees can go to the Legislature and our committees will be listened to. I would like for you to answer this question. "How many teachers of Florida had anything to do, in the last analysis, with the present adoption of the state textbooks?"

Mr. Cawthon: Inasmuch as the noon hour is approaching, and we have two more numbers before noon, I think I would suggest that we close the discussion. We still have the report and the address of the State Superintendent. I know he is in town; I do not see him in the hall, but suggest that it is time to call for the next report.

Mr. Sealey: We will now have the report of the Committee on Foreign Languages from the Chairman, Mr. F. W. Buchholz.

Mr. Buchholz: I would like to call on the Secretary of this Committee, Mr. H. G. Metcalfe, of Live Oak, who will present the report.

Mr. Metcalfe: Mr. Chairman, Ladies and Gentlemen: It will not take me long to read this report. Before I start I am going to clear myself. I am getting just a little bit tired of being referred to as Cheops and every other thing like that. I do not think I am a reactionary. You know there are some people who are never satisfied unless they have a change; whether that change is for the better does not seem of so much importance as the fact that we have a change. They say, "Let us put in a general course in this, a general course in that," but you cannot pin them down to anything specific, so they keep on the same tune until they become incoherent, very much like people in love. This report is not a full report on foreign languages, it makes no pretension of laying down a course of study. It does, however, make one or two remarks on the way we have been teaching one of the foreign languages, and it may surprise you to know that that language is Latin. I will put it in another way. Simply because we have not been right in the way the subject was presented is surely no reason why we should take away from the children their heritage. By that I mean the enjoyment of lessons they get from the ages. They cannot get that in the right way unless they put in personally many long hours of work. In England the average school takes three years and their years extend about ten months, and they read Caesar. The boys there are about as thick-headed and about as fond of study as our boys. There were lots of things they did not know, but I cannot remember in my time of one who would have to hesitate when asked for the forms or conjugation of any of the verbs they had had. Today, you could go to any school in Florida and stump them on three out of six words, probably four out of five.

REORGANIZATION OF FOREIGN LANGUAGES FOR THE HIGH SCHOOLS OF FLORIDA

By F. W. Buchholz, Principal Gainesville High School

The authors of this report do not claim to have made any startling discoveries, nor do they flatter themselves that they have anything to prescribe which can be a guaranteed "cure all" for the perplexities or failures that constantly confront one in the Latin course as laid down in our course of study.

They do think, however, that their experience in teaching and observing under the conditions that have hitherto maintained in our State, justify them in making some criticisms, and offering some suggestions that may tend to make the teaching of Latin more effective, and, which is most devoutly to be wished, the absorbing of the rudiments thereof less an object of dread and dislike to the student.

In regarding the various reports, manuals and suggestions that have recently been put out by the different State Boards of Education, one finds, reading between the lines, two things apparently admitted by each author:

1. A dread, amounting almost to certainty, that the average pupil will cordially dislike Latin, and that only compulsion or most earnest and sustained coaxing will make him carry his course through.

2. The admission that we are bound to have a greater percentage of failures in this subject than any other academic study.

If these two conclusions be well founded, we are driven to accept one of two theories, viz., either that Latin is a subject much more difficult in itself than the other high school studies, or that there is something vitally wrong with our way of presenting it.

Now it is a fact worthy of note, and one that will be corroborated by any Latin teacher in the land, that the students who fail, or have great difficulty in making their grades, will invariably put the blame on their failure to "get" (the expression is their own) their First Year Latin.

Now we claim that *no* subject in its elementary stages need be very difficult, and if our chief cause of failure in Latin lies in the inability of the student to grasp the fundamentals (and the students themselves put the blame there), then our first

theory, viz., inherent difficulty, is thrown out of court, and we are driven back to our second one, viz., Wrong way of presenting it.

Since all inquiry seems to focus on the First Year's work, let us discuss this unit of study as we have it in Florida. As the 8-4 plan is still the one in general use, the student begins Latin in the 9th grade. He has eight or nine months, 32 or 36 weeks, less examinations, for his work.

During this time he must master what are usually termed the forms, that is he must learn the declensions of nouns, pronouns and adjectives and the conjugation of verbs, regular and irregular, then, too, he must know prepositions and the cases they govern, verbs and adjectives that demand special cases, various constructions peculiar to Latin, the various clauses calling for the Subjunctive Mood, and in fact everything that will be needed to enable him the very next term to read and understand (not to say enjoy) a highly technical history of Roman campaigns.

Gentlemen, it cannot be done. It is an attempt at forcible feeding, at the very stage of the work where the progress should be most slow and sure. A language to be known must be absorbed. To be absorbed, it must be used. The mere repeating of paradigms parrot fashion, will only give us parrots, and just as long as we call for all this work in one year, just so long will our students protest, drop out and fail.

In considering the place of any subject in the curriculum, one is limited by the present organization of our schools, and especially by college entrance requirements. Just as long as so much Caesar, so much Cicero and so much Virgil is required by the colleges, the high schools must in some way try to teach it.

If our present organization permitted the beginning of Latin in the seventh grade, and hence the taking of three school years to thoroughly master the forms and constructions, then Caesar and Cicero would be reached without the resulting heavy mortality that we now have, and furthermore, these authors would in a great measure secure the liking and appreciation they deserve and the great source of trouble would, in our opinion, be removed.

Furthermore, by their infinitely greater ease in translation, pupils thus prepared could devote more time to the study

of Prosody in their Senior term, and thus Virgil would, in a measure, come into his own.

As our work is arranged now it is a question of very great doubt to the writers as to whether Virgil has any place in the high school curriculum at all.

We think as the Aeneid is too fine a thing to be ruined, and we venture to say from bitter experience that at present, if the Latin teacher were to devote the time to the hexameter that should be so used, and to demand the oral and written exercises in scansion that the occasion calls for, not only would he have to begin at the very beginning and teach Prosody to those to whom it is at present utterly meaningless, but, alas! the term would be over before the second book was finished, and the entrance requirement would not be made. As it is generally, there is very little time for anything but bare translation—and what translations we do get! In far too many cases Virgil is read as prose and the whole beauty of the work is lost.

If we do not wish to see Latin go the way Greek has already gone, it is incumbent on us to make such changes as will give our boys and girls a chance to assimilate as they go, and in Latin assimilation means appreciation, and appreciation means success in the study of it. To sum up: By our present system we have brought it to pass that we do nothing thoroughly. Our First Year is more or less a total failure through trying to learn too much in too little time.

Our Caesar, based on too little preparation, calls for so much translation as to leave far too little time for Prose Composition. In Cicero the same fault applies, with the added misfortune that a great percentage of the students never realize what wonderful speeches they have been reading; and finally the study of Virgil's Aeneid, as a wonderful poem, simply *is not.* These are the facts as we see them, and if our vision be true, then surely the present dread of Latin on the part of so many students, and the many failures in it, are things easy to understand. At present, however, in most schools it is not feasible to begin earlier than in the ninth grade, so we have to do our best with our present organization, and the following is merely an arrangement of the work suggested to try and minimize these faults already discussed.

A. In the First Year sacrifice everything else in order to get the forms and their common uses. The five declensions and the four conjugations *must* be known whether the constructions are taken or not.

B. Drill on simple sentences, calling for the various tenses of the Indicative, Subjunctive, Imperative and Infinitive Moods in the English sense: Learn the various cases of nouns, pronouns and adjectives until these forms are absolutely known. If we arraign this knowledge, we can build on it; if we fail here, we fail everywhere. Make no attempt at learning "indirect discourse," "ut clauses," "indirect questions," and the various uses of "qui"—to mention only a few of the present barriers—until the pupils have gotten the various forms so fixed in their minds that they can produce them at will, and recognize them at sight. If this work is done as thoroughly as it should be, there will be no time for anything else.

Having then truly mastered the declensions and conjugations the pupil may start on the Second Year: Begin Caesar Book I to the end of the Helvetian Campaign. We have the forms *known*—something never done hitherto—so we can now learn the constructions. Let the pupil learn them as he meets them and let his prose be based entirely on them. Let him go as slowly as he pleases, but let him learn them. It does not matter in the very least if it takes a whole semester to read this part of Book I. If the work is done as thoroughly as it should be, the pupil will be able to read Book II and a great part of Book III during the second semester. In other words, if in one book the forms (always the forms), vocabulary and constructions are thoroughly understood, then the other Books on the Gallic Wars will present no difficulty at all. In any case, surely it is better to have read and thoroughly digested one Book of Caesar than to have guessed, rushed, or "ridden" through three or four.

In the Third Year

If the work in the two first years has been faithfully done along the lines suggested, the pupil approaching Cicero knows his forms thoroughly, has a good idea of the use of Indirect Discourse and some of the Subjunctive Constructions, and

hence, is able to appreciate, to a degree at least, the wonderful mastery his Author shows in word order and the use of the Subjunctive Mood. In other words, he can understand that he is studying oratory of a very high order, and a master whose style he may well strive to follow. Then too, his knowledge of the fundamentals will allow more time for his parallel readings on Roman life, names, laws, etc., and finally, with average students, the work will be enjoyed. Again we would say, "Go slowly." Better the Catalinan orations alone, well read and enjoyed, than the whole of Cicero pitch forked in and scrambled through.

In the Fourth Year

Let the student understand once for all that he is to study a great poem, not prose. Let him learn the use of quantity and accent, and let him mark off, say two lines, into feet daily until he gets the swing of the verse. Check him up by written scansion with every new Book. Make him *read* Virgil and don't let him murder it. The memorizing of passages, as often suggested, may be good, but it will never take the place of written work properly scanned. See to it that all allusions to Greek and Roman Mythology are looked up and take care that he thoroughly understands the historical setting of the poem. Then go slowly, and insist on good translation. Some of the weird offerings we get as translations are a direct reflection on many teachers who have insisted on translation being so literal as to spoil all meaning. As has been said, it is in our minds an open question as to whether the average high school student is sufficiently equipped to get the most out of Virgil, but even so, if he has been properly trained in his fundamentals he can at least enjoy him. Even now our students like Virgil better than they do Cicero or Caesar. It was not considered within the scope of this article to discuss the merits of any particular "method" of instruction (i. e., direct vs. indirect) or to compare the relative merits of different textbooks. The great fact remains that, methods and books apart, we have been building on the sand of too little preparation and expecting far too much from our bewildered charges. This article has been written by those who love Latin both for its own sake and for its beneficent influence on our own tongue, and to whom it is a matter of deepest concern that the proper study of this language should not cease in our high schools,

and the authors hope that their good intent may palliate the possibly poor way in which the matter has been presented.

Mr. Sealey: This is certainly a most excellent and enlightening report and I am sure we have all enjoyed it.

Mr. Workman: I am going to send our High School Inspector for the ammonia to revive some of the others.

Mr. Sealey: Gentlemen, I think this ought to be discussed. I do not think the Chair should have to discuss it.

Mr. Evans: I was a victim of the system Mr. Metcalfe has mentioned and for that reason I hesitated about standing to discuss this subject, but I agree with him most heartily that more time should be spent on First Year Latin, and I do not know but that it would be a good idea for Florida to adopt his plan as a whole. I should have been a man of better scholarship, I believe, had I been able to study Latin in that way. I could have learned to appreciate its beauties, and would have been a better educated man than I am. As it was, I spent six or seven years on Latin, but know nothing about it except in a general way, and I am anxious that the children of Florida should in the future, not have taken away from them this very helpful, beautiful and elevating subject, and I believe that it largely depends upon this reorganization Committee to decide whether the children shall be deprived of this subject or not.

Mr. Ezell: I want to endorse what both of these gentlemen have said. I find that in the DeLand school the children want to take Latin—many of them want to take Latin. It is one of the most popular courses we have and I think the reason for that is because we have a better teacher of Latin than of any other subject. Now why is Latin becoming so unpopular in our high schools? I think that the suggestion here has struck the key note. It is because we crowd too much into the First Year course and our students fail because too much is required of them. It is the most difficult course of the first year, but if we can make this course of equal weight with others not more difficult, then I believe our students will be glad to come back to it and will make Latin as popular, or more so, than any other subject. I feel that both these gentlemen have said the right thing about First Year Latin.

Mr. Draper: My idea is that the pupils who come from the eighth grade with a good English foundation, have no trouble

with First Year Latin or Caesar. Pupils who enter the high school with a good knowledge of English have no trouble in covering First Year Latin in nine months, and go ahead with Caesar all right.

Mr. Buchholz: This report seems to be very well received in its main aspect. So far the emphasis has been upon the methods of study and the giving of more time to First Year Latin. We believe that under the 8-4 plan, Latin should begin in the eighth grade. We could outline two years of preparatory work in getting the forms and the more common constructions, then let Caesar be taken up and others follow in their regular order. We are convinced that unless this is done, we shall continue to get poor results in Latin, and that that is really the only way in which we can improve the situation. It has been stated that pupils coming into the high school thoroughly grounded in English have no trouble getting First Year Latin in nine months, but I have yet to see a pupil come out of the eighth grade thoroughly grounded in English. It cannot be done; it has not been done. We continue to teach Grammar in the high school. If we did not teach Grammar in the high school, a great part would never be understood at all, so that we cannot depend upon thorough English to get pupils over the First Year of Latin in eight or nine months' time. If we are to come to the Junior High School idea, the 6-3-3 plan, and I believe we are coming to it, I hope so at any rate, then we could give Latin either in the seventh and eighth, or in the eighth and ninth grades, perhaps give it in simpler forms and in smaller doses and stretch it over a longer period of time. This, I believe, would be beneficial and exceedingly helpful in regard to forms. I hope that we may have some other opinions expressed. We did not come here to hear anyone attack Latin or to attempt to throw it out of the curriculum, and so far we have not heard that. We do regard it as a very important subject. We do not wish to cram it down the throats of all the children, and do not want it made compulsory, we do not agree with that. So far as the popularity of the subject is concerned, as indicated by the number taking it, I believe it is about as popular with the average pupil as any other study that is not required for graduation. People have various ideas about teaching the subject as a rule. This year in our First Year Latin class, out of eighty-five in the

ninth grade, we had over sixty clamoring for Latin. We knew, of course, that a great many of these, about twenty perhaps, were not Latin material, but we were very fortunate in having a class in Agriculture in the ninth grade into which we might put these buddies. We do not have a General Science course to help out.

Mr. Roemer: I want to compliment that paper, particularly for the splendid way in which he handled the subject of Latin. I think that all agree that we are not doing it properly where we are doing it. In discussing the State course of study here, we are centralizing on only one element of a great big problem. In other words, we are magnifying Latin out of all proportion to what it deserves. Today we have one three-year high school offering French and no two- or one-year high schools teaching the subject. Again, there is no Spanish taught in any of these one-, two or three-year high schools. In other words, with the exception of one three-year high school, there is no modern language taught in any of these seventy-six smaller high schools of the State. I believe that modern languages have a place in our one-, two- and three-year high schools and also in our modern junior high schools. As it is today in Florida, our modern languages are confined wholly to our four-year high schools. The only exception to this rule is to be found in the junior high schools of Tampa. Personally, I think that this is wrong. If we recognize all of these small aspiring one-, two- and three-year high schools and make either junior high schools of nine grades or senior high schools of twelve grades of them, there is no reason why modern languages should not find a place in the course of study of the junior, as well as the senior high school. As it is, we have a one track, narrow-gauged railroad system.

Again, where we have the modern languages taught, we do not have in many instances a proper balance. I mean, we are undertaking too many languages. Where this is done, it means one or two years in some two or three different languages. My position is, we should do more intensively what we are attempting to do. Intensive, rather than extensive language work, should be our motto. This is in keeping with the spirit of the paper just read. Let me illustrate my point from these charts on the wall. Notice these two high schools. This one is offering a total of eighteen high school units dis-

tributed as follows: Four English, three Latin, one French, one Spanish; fifty percent of all the curriculum is linguistic. Not only that, but three different foreign languages are offered with two of them only doing one year each. When you add to these nine units, four more units of Mathematics, three of History and two of Science, you have it all. Gentlemen, this school is not only violating this principle of Foreign Languages that I am discussing, it is violating the bigger principle of a balanced curriculum, which I cannot dwell on here.

This other high school offers twenty and a half high school units distributed as follows: English four, Mathematics three and a half, Foreign Languages six, History four, Science three. The Foreign Languages are distributed as follows: Latin four, French one, Spanish one. Adding to these six units of Foreign Languages four units of English, you have fifty percent of the curriculum linguistic. This high school, also, as the one above mentioned, violates the two big fundamental rules of curriculum building. In this connection let me speak frankly about a matter which I've hinted at already since I began this discussion. I refer to the relation of Foreign Language units to the other units of the curriculum. Many of our high schools do not have the proper balance. Look again at these charts. Let me point out some instances:

Out of a total of 18 units, 7 are linguistic;
Out of a total of 17 units, 8 are linguistic;
Out of a total of 14½ units, 6 are linguistic;
Out of a total of 23½ units, 10 are linguistic;
Out of a total of 17 units, 7 are linguistic;
Out of a total of 20 units, 8 are linguistic;
Out of a total of 14 units, 8 are linguistic;
Out of a total of 23 units, 12 are linguistic;
Out of a total of 16 units, 8 are linguistic;
Out of a total of 13 units, 6 are linguistic;
Out of a total of 19½ units, 8 are linguistic;
Out of a total of 18 units, 9 are linguistic;
Out of a total of 10 units, 6 are linguistic.

These are only a few of the large number on this chart showing the curriculums of these ninety-eight four-year high schools. Gentlemen, I submit this situation is in need of attention. The languages and Mathematics are all out of proportion to the other recognized phases of the high school curriculum. Before taking my seat, let me say that I believe the State Department should give four units of credit to each of

the modern Languages. Our forthcoming catalogue of the University is going to carry an announcement along this line to the effect that beginning with this Fall, we will accept four entrance units in any of the modern foreign Languages.

Mr. Buchholz: I do not want the impression to get abroad that we are not going to include any other language in our Florida course of study. This Committee was appointed to draw up a course of study of the Foreign Languages. We have already had to draw on others in the State in order to get some start in Spanish and we shall perhaps have to have other assistance in French and German. I believe it is just as necessary to put four years on Spanish, or French, or German, as it is to put four years on Latin. If you are going to study and are going to get anything out of it, two years is very little time. We believe in Modern Languages, but at the same time, we believe that Latin as a basis for English, Spanish and French is of more importance. Where you are merely studying the language for the benefit to be derived and as an aid in understanding your own language, we think Latin is of the most importance. We particularly do not want the people here to get the idea that we are not going to have any Spanish or French or other modern Languages. In fact, Mr. Hensley, who has had a great many years' experience in Spanish speaking countries and who is a fluent speaker of Spanish, has been drafted and is preparing a course in Spanish. He is here today and perhaps has a brief report that he would like to submit. We hope to be able later to prepare something on all of the languages for your consideration.

ADDRESS

Hon. W. N. Sheats, State Superintendent

I did not hear the paper read and do not want to sound any discordant note, but I think I can answer some few questions that have been asked during the discussion of the paper.

As to the popularity of Latin—I believe I can tell why the study of Latin is not more popular than it is.

I examined almost all of the teachers of Latin in the State of Florida up to a couple of years ago; I have also examined many classes in Latin in different high schools of the State, and I am convinced that the main reason why Latin is not

more popular among the students in the high schools is largely due to the poor manner in which the subject is taught. There have been, in my judgment, very few teachers of Latin in this State that were prepared to teach the subject at all.

If First Year Latin, as you call it, is properly taught, nine-tenths of the pupils will like Latin; otherwise, they will not. It does not matter so much how much time may be devoted to First Year Latin, as how well it is taught and learned. I would insist that enough time be given to it that the pupil really master it, even should it require more than one year.

Take any other science, Arithmetic, for instance, when poorly taught it is a very unpopular subject with pupils, still every one insists that Arithmetic is a very important branch and must not be eliminated from the Course of Study. No one would advise eliminating Arithmetic, as in the case of Latin, on account of the way it is being taught; yet, if you will visit many of the schools with me, I will demonstrate to you that many get very little value out of the study of Arithmetic.

To revert, then, to my previous statement: I assert with great confidence, that the main reason why Latin is unpopular and sought to be eliminated, by some, from the Course of Study, is due to the fact that so few are prepared to teach it as it should be. My experience, through many years, demonstrates to me that where there is a good teacher of First Year Latin, the pupils will complete it within one year; it also forces me to believe that where pupils properly master First Year Latin, nine out of every ten will like Latin better than almost any other study. While, on the other hand, if Latin is poorly taught, nine out of every ten pupils will want to drop Latin and will reproduce the hackneyed arguments of some of their professors that there is no practical good in the study of Latin. Pupils are given to the habit of trying to produce the arguments of their teachers—it matters not whether they are weak or strong.

Now, as to the value of the study of Latin: I know that there are a great many, some in this body, who will not accept my statements, and these are the ones who are carrying on a concerted effort to substitute for Latin, Modern Languages, or some of the least important of the Sciences, and to leave Latin entirely out of the Course. Why? Just as has been stated above, because there are so few who are able to teach

the subject thoroughly and attractively. The course of study in many of the schools stresses chiefly the subjects that the principal has mastered and likes best; such subjects receive the greatest consideration in these schools.

I would like to ask the opponents of Latin what they would name in the high school course, or even the University, that could wisely be substituted for Latin, or that would profitably fit into the lives of more people in the various callings and professions of life. If a man is a lawyer, Latin serves him well; it is difficult for one having no knowledge of Latin to thoroughly understand legal terms. Latin is of great value to a physician. If one seeks to be a writer or author, what one study would be worth more to him than Latin? It matters not what profession or what industry one contemplates entering, I know of no study of more practical utility than Latin.

A young mother stated to me a few days ago—doubtless she was quoting what some weak professor of Latin had said to her dull and lazy boy: "I do not want my boy to study Latin; I see no use in it anyway. I studied Latin, but I find no use for it." I replied, "Madam, do you find any daily use for the Algebra you studied?" She answered, "Well, it enables me to help my boy with his lessons at night." Possibly she could have helped her boy with Latin if she had learned anything about it.

Now, honestly, has any one of you ever found any real practical use for the Algebra you studied? I confess, outside of teaching it, that it has served very little practical use in my life. Still, I am a strong advocate of the whole Mathematics course. I stood well in every branch of Mathematics, making 100 during my whole course, from Arithmetic to Astronomy, but I say to you in all candor that, beyond the mental drills received, Mathematics has proven of very little practical utility to me. It has enabled me to calculate the interest, and satisfy myself it was correct, which I have had to pay the other fellow for the use of his money. If I had selected surveying as a life work, or had become a college professor, possibly, I would have needed a Mathematics course more than I have.

Now, considering just one subject: I want to stress this one idea in talking of substitutes, that Latin fits practically

into the lives of more people than anything studied in the schools, except possibly, it may be English. One finds a practical use for a knowledge of Latin every time he holds a conversation, reads a newspaper or book, has to write an article, or interpret something written. Is it not a fact that there are very few noted men in any line, even laying aside the professions and authorship of imperishable literature, who do not pay tribute to the value of Latin?

The study of the Modern Languages has been defended. I am not one who decries the study of French, Spanish, or even German. I completed a two year course in German and was rated as a fair German scholar; however, I believe that the practical utility of Latin is worth more than all the Modern Languages combined. While I say this, I hope to see a great many of the high schools of Florida teaching one or more of the Modern Languages. It has been insinuated in this discussion that the trouble with all the Languages is that they are taught too shoddily. I believe this. I have observed that the study of Latin by a great many of our Florida pupils is limited to one year. I ask, in all candor, what is the study of Latin for one year worth even under a person who is capable of teaching it, not to mention that most of these years is under persons who are really not qualified to teach it?

Latin is generally neglected because it requires real study and time to learn the Language. Most pupils fall behind in Latin and are permitted to drop it; then French is taken for a year, and possibly a few little French phrases are learned, when it is found that it takes labor and time to learn French, then they are permitted to drop French and possibly Spanish is taken up with the view that it is more easily acquired. You will find, in some of the schools, that many of the pupils have taken Latin one year, French one year, Spanish one year, and, possibly, German one year, or something else—all four years being thrown away as to the practical benefit acquired. If all four years had been spent on one Language—Latin, for instance—the pupils possibly would have derived some benefit from the study, even though pursued under an unfit teacher. I sincerely hope that you principals will discourage your pupils jumping from one Language to another.

I do not presume that but few of this body will approve of my statement that Latin is worth more than all other foreign

languages combined. As stated above, while I confidently believe this, I do hope that the study of some Modern Language will be incorporated into the Course. It is unfortunate that a great many school principals decry the study of those things that they know the least about. For a time I was very much alarmed at the apparent universal cry to put Latin out of the Course of Study. I really feared lest the elimination of so important a study would gain such headway that an attempt would follow to eliminate everything in the Course which some teacher did not understand, or could not teach successfully, until practically the whole Course of Study would be eliminated and we would be graduating pupils on a little English and a few of the easier and less important Sciences.

As to the teaching of Latin: My criticism may not be absolutely just, but I am under the impression that Latin is not taught in such a way as to teach the Language itself. If it is studied merely for its literary value without teaching the grammar of the language, the subject had better be thrown down and the pupils allowed to read some English work on the same subject. It is my observation that a great number of teachers are trying to teach Latin without teaching the grammar of the language. No one could teach English successfully without a knowledge of English grammar; nor can one teach Latin successfully who does not drill the pupils in the grammar of the language. In general, no one can claim to be master of any language, unless he knows the grammar of that language.

Another thought as to the teaching of Latin: I am sure that most teachers are trying to cover too much ground, so that there is no time left for the teaching of Latin grammar. If Caesar be taught thoroughly, stressing the grammar of the language, if but one book is read intelligently with the Latin construction being stressed, that one book might be worth considerably more than if six books of Caesar were read with translations in the manner it is generally taught. I really believe that Caesar is the best text in any Latin Course for the successful teaching of Latin Grammar. If the one book of Caesar be thoroughly taught, with Latin Composition in connection therewith, I confidently believe that the average pupil, by himself, might complete almost the whole Latin Course with the help of a really weak instructor. I find, in

many of the schools, that, after the first year in Latin, no grammar is found in the hands of the pupils. Many of them are expected to prepare a Latin lesson by ten or fifteen minutes' casual study. They get an idea of the English from some more studious fellow-student, from some translation or interlinear, and are trying to recite lessons without knowing the meaning of the Latin words or having any knowledge of the Latin construction. Most of them say it is "too hard"—"I despise Latin"—and is of no practical utility; hence, parents and pupils are striving to lay aside the subject, and, in too many cases, are encouraged by the principal of the school or the weak teacher of Latin.

Have we reached the stage when pupils are expected to be educated without work? It really seems so. No pupil need expect to learn any Science of value without study or labor, it matters not whether it be Language, Mathematics, Science, or History.

Now, on the subject of promotion of pupils if they have not read as many books in the Latin text as the Course of Study calls for: I would say, if the Latin recitations be conducted in such a way as to eliminate shoddiness and laziness, with the grammar being taught so as to master the language, I would advocate promoting the pupil if he has read properly but one book of Caesar, or Cicero, or Virgil. I go so far as to say that ten chapters of Caesar, thoroughly mastered, would help a student more than three books of Caesar, or any other Latin text, merely gone over as it is done in most of the schools. I have examined high school classes in Latin in the Fourth year who did not know two constructions in Latin, did not have a Latin vocabulary of fifty words, could not decline a noun of the first declension, or conjugate the verb *amo* in any mood or tense named. Still, these pupils are given so many units because they have pretended to study Latin for a certain length of time.

Let me insist again that high school principals, when a pupil elects Latin, not consent for it to be thrown down the first time he finds that it really calls for work. Discourage the practice, and go to the extent of conferring with the parents, who are generally joining in with the pupil that Latin be dropped.

In this day, it is not only the unwilling student of Latin that seems to have adopted the notion that an education can be acquired by a few months in a summer school or by taking certain courses for a short time in one or more institutions of learning—acquiring an education without labor seems to be the fad of the age. No one ever mastered any study or attained anything really valuable in education without labor—and never will.

Mr. Wilson: I would like to ask Superintendent Sheats this question. He said something about it being worth while even though they do not do the whole of it. Suppose we read only two books, and our High School Inspector asks, "Why haven't you read more?" What are we to do? We *must* give credit for the course; we must give the unit; he is expecting it. I would like to know about that.

Mr. Sheats: I am not now quoting from the Course of Study or any law on the subject. If any principal finds a class in Latin in such condition that it can not cover the required ground prescribed, my advice is to stop with what the class can do well. Let him promote on the actual knowledge the class has of Latin. I would teach the syntax of the language thoroughly, examine and find out their real strength and knowledge of the language, and would promote them accordingly, whether they had read two, four, or six books of the Latin text. If any one objects to the promotion of any member of the class, I would demand that he examine the pupil along with other pupils who had read more, and promote him in accordance with the actual knowledge he showed of the Latin language and not on the amount he had skimmed over and pretended to read. If the High School Inspector objects to this course, I suggest that the principal appeal to me for an examination to determine which pupils are most deserving of promotion.

Mr. Cawthon: The fact that a class had covered only one book of Caesar in the time prescribed for four books, would be no evidence, in itself, that the instruction had been thorough. Some of the most inferior work that I have seen in this state was being done by the classes two or three months behind schedule. The capable teacher finds it possible to cover, approximately, the required ground.

Mr. Metcalfe: How glad I am to find that I am not alone in my glory! Doctor Sheats had not heard that paper.

Mr. Evans: Ask the High School Inspector if it is not true that most high schools require a minimum of two years of any foreign language.

Mr. Cawthon: Yes. We are discouraging anything less. We do not say we will not accept the one unit, but the practice is not to accept it.

Mr. Sealey: This discussion is certainly interesting. I want to say that if the rest of the report of the Committee on Modern Languages is as good, enlightening and progressive as their report on Foreign Languages, and we are able to follow out their recommendations, we shall certainly have our language teaching on a better basis. I do not believe that Latin has anything like the enemies that some seem to think. The Southern Commission has recommended that the requirements in Cicero and Virgil be reduced by one book and Caesar two books. If we could do that, and then take three semesters for what we call First Year Latin, we will have better Latin students and get more out of it, and get away from the unfriendly criticism toward the subject. I resent the implication that Latin is difficult; I do not think that Latin is any more difficult than Algebra when well taught and properly presented.

Mr. Sheats: I want to endorse the statement that Latin is no more difficult than algebra.

Mr. Corr: Mr. President and fellow teachers: Just a moment. I distributed copies of the *School Journal* all over the auditorium. You will find in each copy a small envelope. Slip a dollar in it and hand it to me, if you want the *Journal.* I want the advice of the High School Inspector as to how this body feels about whether it would be wise to present a resolution concerning the matter of textbooks. I believe our State Superintendent would be interested in receiving it, if presented.

Mr. Cawthon: It has been my idea all along that we should not get too many things on our schedule; that we would merely discuss these things until such time as we were ready for action. Until such time, the State Board of Education would not perhaps desire to hear from us. It may be that some things are ready now to be presented to the State Board. It

was not my idea to hurry it, or hurry them. Whenever they were ready and needed us, we would be ready. It may be that time is at hand, that we would want to formulate something and ask their respectful consideration of it. If they wanted to take any action in the matter of making and passing regulations concerning it, that would be their business; if they did not so see fit at this time, they could postpone it until further developments. It would rest with the body. I would think rather favorably of appointing a committee.

Mr. Metcalfe: If the Committee should be continued, this report should not be considered as final.

Mr. Woodward: Is it not true that there was a General Committee appointed which is made up of the Chairman of each special committee of reorganization, and would not this question we are discussing come under the jurisdiction of that Committee? It seems to me that we can simplify matters a great deal if we can simplify our present complicated situation. In his address yesterday, Dr. Roemer took the position that we should reorganize our schools on the 6-3-3 plan. He took the position that we should have nothing but a nine- or twelve-grade high school. The Conference voted unanimously to stand for that principle. It seems that this question ties very closely on to that principle. I see no reason why we cannot simplify these school conditions a great deal by following this plan. If the pupils in the country want to go to the senior high school after having finished the ninth grade of the junior high school, transportation can be furnished them. By having at least one senior high school in each county, every pupil would be in reach of a good four-year high school education. It would be much more economical for the County Boards to do that; much better to pay transportation than to provide an extra grade for a couple of students. So it seems to me that if the whole State would come to that plan, it would simplify our situation a great deal. This morning, one speaker said that our high school pupils were not being taught properly, and I am wondering if this is not due to the fact that we are trying to have one person do in these little schools mentioned two and even three years of high school work alone.

Mr. Corr: I think it would be well to have a committee on resolutions. So far as the committees that have already

been appointed by the County Superintendents and Principals meeting at Live Oak in February, is concerned, I think it would be wise to say that we pledge our support to the committees that have been appointed by these two bodies, and that we will try and aid them in getting their petitions through the Legislature. I think too many committees unwise; there might be some conflict of ideas.

Mr. Sealey: I am sure that we want to be guided in all this by the State High School Inspector.

Mr. Cawthon: I have looked upon this organization from the beginning with a great deal of pride. I have taken a great deal of pride in it, and I would regret to see us get out of what I consider our sphere. I am very glad to hear Professor Corr say we were not in politics. Let us not get into politics. We are here primarily to study what is going on in our high schools. The high school curriculum this time is our business. A report on library and laboratory equipment, teachers' books, textbook commission, etc., would be interesting to the County Superintendents. I want to sound a warning note. Let us not get out of these things pertaining to the high school. That is what we are here for; that is what I wanted us to meet for in the very beginning. I want to do all the things that are coming up, but let us not get off the track as was said by one of the members. I am only one of you. You are a democratic body and I just want to warn you not to get into something that is out of your sphere. I think we should now have the report on Foreign Languages by Mr. Hensley, which he has been requested to prepare. He is ready with his paper on Spanish. After that, I hope that this body will have the pleasure of hearing the State Superintendent, who is scheduled to be here.

Mr. Hensley: Mr. Chairman and members of the Conference: I was added recently to the Committee. I did not take it that I was expected to make a written report outlining a course of study in Spanish at this time. I would like to say a few words, however, in addition to what the Committee has already given as a report on Foreign Languages, confining itself principally to Latin. I have been very successful in Latin, both in learning it and in teaching it, and being examined in it. I like Latin; I like teaching it, but in my teaching of it I was never able to get beyond two books of Caesar.

I refer to that simply to bring out the point that in the study of Latin, or language of any kind, I think that those students who are most successful are those who have learned the principles of general grammar. General grammar is the foundation of any language. I found it true with those who had studied Latin previously to coming into the Spanish class; they learned Spanish much more rapidly. I do not believe that it was altogether due to the fact that the study of Spanish was preceded by Latin, but it was because in the study of Latin they obtained their knowledge of general grammar. It is true that the vocabulary of Spanish is very similar to Latin and French, and having studied Latin and French before I undertook the study of Spanish, I learned, as the Cubans told me, "too quick." I was able to develop a speaking knowledge of it within six months. I have taught Geometry, Arithmetic, Geography and History in Spanish. I have at different times taught classes in Spanish, and am teaching it now. I have practically covered already all the requirements for the first year, according to our course of study, and for the rest of this year I am to do as I please. I am going to take up newspaper reading and more conversation. Spanish, contrary to the opinions of some, has as much literary value as French. French has been the literary language of the world, and for that reason has come to be regarded as the most profitable language. Still, those who have studied Spanish realize that it has as great a literary value as French. I believe we should encourage the study of Spanish rather than French, because of its commercial value. The time is coming when North and South America are going to stand more off to themselves, and the English countries are going to stand off to themselves. We will be Americans, and they will be English, and that will push French a little more into the background. Spanish is coming to the front, not only as a commercial language, which we will need in order to transact business matters, but we are going to appreciate the literary treasures of the South American countries more than ever. Ever since the completion of the Canal, Spanish has taken a start towards its present popularity. Business colleges and high schools all over the country, and people from those countries, are telling us that it is absolutely necessary for our closer relations that we study Spanish in order that we may

enter into closer relations with and a better understanding of the people with whom we wish to deal commercially. Regarding the teaching of Spanish, I believe it should be taught from the speaking standpoint, and not from the thought of reading. A great deal of reading should be done in class, however, but of a simple kind; something on the order of the first, second and third readers in our English language. I find the course in Spanish as outlined by the present course of study not a very practical one. It leads only to a reading knowledge of Spanish. I have practically covered that ground and am developing and supplementing it, which will place my first year class in Spanish farther ahead than is required by the present course of study as it is outlined. It has been suggested that the study begin in the ninth grade. I think that is a fine suggestion; that the first two years of the high school be given to the study of Spanish or Latin. If four years are spent on the study of Spanish with as great effort as on Latin, there will result as great a development—development of linguistic ability, and ability to think and solve language problems, the uses of grammar and an appreciation of the literature—as in Latin. So whatever language we undertake, whether ancient or modern, I think we should get some real benefit from it, and in a modern language like Spanish, we would get more benefit than from Latin.

Mr. Sealey: What newspaper did you think of using?

Mr. Hensley: I have here a sample copy of a paper published in Tampa that is good. It is called *El Comercio.*

Mr. Evans: Do you consider more than two years of Spanish necessary or advisable in the high school?

Mr. Hensley: No, sir. With a good teacher, you can learn all the Spanish you need in two years.

Mr. Sealey: We shall be glad now to hear from the State Superintendent, Honorable W. N. Sheats.

ADDRESS

Hon. W. N. Sheats, State Superintendent

Mr. Chairman and Friends: I hope you will give me credit for having more common sense, the only sense that is really worth anything, than to harangue you with a speech at this late hour. You have been in session here since 9 o'clock; I know you are tired, and if I wanted to make a speech I am not prepared. I say, candidly, that I did not know that my name was down on the program for an address. The High School Inspector sent me a program, but I was so busy that I failed to read it. When I walked into this hall and found out what was being discussed, I looked on the program for the first time, reading thereon, "An Address by Supt. Sheats." Now, my friends, you ask why I am so occupied that I do not keep posted. I will tell you. It is because there are so many other people connected with the educational system of the State that will not do their duty—at least will not do it in time. You know the Legislature is now in session. I have been working day and night for the past few weeks trying to get a report ready but could not do so because others in the Department were tardy in doing their part of the work. You know my report must be made from the reports of county superintendents. The Regulation of the State Board requires that these reports should be filed in the office of the State Superintendent by the 15th day of July of each and every year. Some of these reports have reached the office in February, and by all kinds of "fussing and cussing" the past year, the last of these reports was filed a day or two before Christmas. It takes about four months to check up and tabulate the reports of county superintendents and get the State Superintendent's report ready for publication. I wish you could see some of the reports that your head county school officials have made to me—if my 6th grade pupils could not do neater and more accurate work, I would demote them to the 4th grade. It is a shame to have to send them back for correction, though it is expected that the report of the State Superintendent should contain all necessary facts and be reliable.

Now, this much is said in answer to the question why your State Superintendent did not know his name was down for an address upon your program. This same excuse is also why

he was not in your body yesterday and why he was not here earlier this morning.

I wish some of you principals would go back home and get to work and learn something about practical business, and four years from today get promoted to the office of County Superintendent, knowing how to discharge the duties of the office and taking some pride in how you discharge those duties. This is the vital point in the school system where improvement is imperative. The average standard of the office of County Superintendent must be raised. You may not have the courage to stand out and boldly advocate with me a higher standard for the office of County Superintendent, but were it possible for me to hold office 4,000 years more, I would be found preaching the doctrine of putting at the head of county school systems men versed in business practice and who have the courage and industry to discharge the duties of the position. Florida has some good men in the office of County Superintendent—some splendid ones—but, necessity compels me to say, some that are not worth "shucks." As a rule, they are the best paid men in the State for the service rendered. They receive an average salary of over $2,000; the salary of one is better than the salary of the Governor of the State. There are some few who, I do not believe, put in an honest, solid week's work in the whole year. Some of these go down to the county seat once a month and draw their salaries and seem to think their duty is done.

I say again, too many of such officers is why I am not prepared to properly meet the requirements of your program. Your State Superintendent is tied down and over-worked because others do not do their duty. These are not here, but I do not mind your telling them what I may say. I did not say half as much as I should have said at Live Oak, although it was alleged that I "roasted" the County Superintendents.

Do you realize that millions of money is being practically thrown away in our school system? Over $8,000,000 were paid out for the public schools of Florida the past year. The expenses in salary and equipment are growing daily. Teachers and all are asking for more money. The universal cry is "more money." The present Legislature is being besieged for more money, yet great quantities of it are being wasted on

figure heads. Some of the states pay their State Superintendent $5,000 a year, while some of their City Superintendents draw as much as $12,000 a year. Yet, here in Florida, it is impossible to get enough money to give a head clerk an adequate salary. Many of the most important State school positions are necessarily filled, not by men of the first magnitude, because of the smallness of the salary offered. It is hoped that some of you better qualified high school men will fit yourselves for these positions, and that you will aspire, not only to the State Superintendency, but to other State school positions. Let me insist that you qualify yourselves, not only through accurate learning, but by being thorough and accurate in everything you do. Before I turn over the office of State Superintendent—if the Good Lord allows me to serve out the present term—I am going to join in with others in striving to hunt out and help find a fit man for the position. We want a man of ability and business qualifications, as well as a man of the highest integrity. I might talk to you an hour on this one point, but I have hinted a sufficiency.

Now, as regards the athletic side of education in which you are greatly interested—I do not want to be classed as opposed to athletics, but I will say that it appears to me that some are infinitely more interested in the athletics of their pupils than in their knowledge of books. Some take the old Roman phrase, *sana mens in sano corpore*, and turn it completely around. You will observe that the Romans put mind first and the body second, both in place and in importance. Mind must always stand first. We need men, but most of all we need wise and just men—sound physically, but above all, sound mentally. If the physical be stressed beyond the mental, a crime is committed. I believe as much as any one in physical exercise, in field sports, but it is mind, not brute force, that has made the world what it is today. It is the man of mind, sound mind, that is so valuable to his country. One real man with a properly trained mind may be worth more to the State of Florida than ten thousand ordinary bi-peds who simply walk erect on two legs.

It is feared that too many pupils emerge from our schools with nothing more than physical development, and care little for mental athletics. If this does not apply to the schools of any of you, do not take it; if it does, think of the force of the

truths that are being uttered. Let me beg of you not to allow the athletic side of education to take the bit in the mouth and run away with your schools. If you simply turn out men with strong bodies and weak minds, education will be of small value to the State.

Now, I believe in athletics, but I believe in making it subordinate. When in college I belonged to a baseball team, but I never belonged to the first nine. The captain said that I must give more time to it and come out for practice, that I did not devote sufficient time to my athletics. My reply was, "I came to college not to be a physical athlete, but to prepare myself mentally to serve my time and generation. My body and exercise must be a matter of secondary consideration with me. To belong to the first baseball nine demands more time than I will consent to give to athletics." So, you see, I was no college athlete and I am glad that I was not. Mark well the thought that mind stands first in my measurement of men.

Permit me to go back, now. I am yet but a youth, though I was 70 years old in March. I have been studying men and conditions for half a century, and have been placed in positions where I could see men from many angles. I am going to review, briefly, the after lives of my college mates who belonged to the first baseball nine. Where are these men today? What became of them, what did they do for themselves or for mankind or for their country? How did they stand in their classes, how many of them received college honors outside of the athletic field? How many of them took medals in their various branches of study? They had strong bodies, but what have they done? They had health—I admit health is of prime importance—but their after lives proved that they got little else. Let us inquire what athletics availed them in the great race of life. Not a single member of the College First Nine, during the four years that I was in College, is living today, notwithstanding their physical prowess in athletics. They called many of us "book-worms" and said: "You fellows are breaking yourselves down over books and ruining your health in search of scholarship."

Now, my friends, such talk may be out of place, but I have an idea that there is a wrong sentiment created in many of the student bodies today and in the minds of many of the teachers, themselves, and that this sentiment is being put too

much into practice. Your schools are being stopped too often for athletics. Your leaders, and many of the students themselves, are here for a half week to play games. I do not approve of too many interruptions. You have come here to this Annual Track Meet. I do not disapprove of this, but have there been any annual meetings of the educators of the State in the interest of turning out better Mathematicians, better Linguists, better Scientists, or more strongly developed men mentally? What would likely be discussed in such a meeting? In short, are we likely to call any annual meetings for the purpose of inspiring our pupils to seek first place in scholarship and mental prowess? When and where have we held such meetings? Have we reached the point where our whole interest is in athletics and none in scholarship? The fear will come over me that such is the case, and I desire to sound a note of warning. High School Principals and County Superintendents, go home and raise the ideals of your student bodies and arouse in them the ambition to be scholars and to be as strong in mind as they are eager to be in body. Try to arouse in them a strong desire to possess cultivated minds, as well as strong bodies. We all admit that sound bodies are desirable, but do not let the athletic ambition choke the schools and run away with them. Seek to raise the standard of scholarship in your schools. I believe that the most of your pupils are skimming over too many subjects—in both high schools and colleges, and that their courses have been made too elementary to develop strong minds. When many students of the present day come from college, the question naturally arises, "For what did their courses fit them?" Many graduate, but the courses in which they graduate are ridiculous. What is the status of their college records? It is my lot, now, to examine a transcript of the courses pursued by many college graduates, and the question naturally arises, "What in the world was he fitting himself for in electing such a course?" There was found one who took an A. B. in Drawing; another graduated in Illustration; another holds an A. M. in Economics. Do such courses indicate that such graduates can teach Mathematics, or Language, or Science? Such seems to be the status in higher education all over the country, if I may judge by the hundreds of college transcripts being examined by me daily, filed by those seeking certificates for the highest po-

sitions in the schools of our State. Such conditions exist in our own Florida schools, I am afraid. Let us raise the standard and lift the ideals of pupils so that they will aspire for mental as well as physical prowess.

The standard of scholarship is being lowered in the way in which examinations are being conducted, both in and out of the schools. Education is becoming a dodging process. The professor has not the courage to rate the standing of his pupils absolutely. The pupil is either rated in letters—which are supposed to range between certain figures—or his rating is given in some unintelligible, indefinite something expressed by "units." Oh, yes, he holds examinations, and the old professor sits down at his table piled with examination papers. He merely glances at one and says: "That looks fine," and he places it in the "A" pile; another is scanned, "That is not so good," and it is placed in the "B" pile; another is taken up with the remark, "That is only an average paper," and it is placed in the "C" pile; he barely glances at another, "That is not quite so good," and it is placed in the "D" pile. The remainder are hastily put in the "E" pile and are marked "flunked." The whole examination is gotten through with in the time it would require to properly grade definitely half a dozen papers. When I ask him what "A" means, he says he can not tell me—"I never grade in figures." My friends, I would like to see the grade put down so that when a grade of 94 is given in Arithmetic, I may know exactly what is meant; but when I am told that he was given a grade of "A," neither I, nor any one else, knows what is meant. Back there, fifty years ago, old Prof. Clark, a graduate of Brown University, marked in figures to a fraction of one per cent. He gave me in Latin, 99 11/16, and so on with my class mates. I could wish that we could get back again to that kind of exactness and willingness to do actual work as school teachers.

In closing, permit me to say again, as a student, I would far rather have stood at the head of my class than to have been the whole football team combined. I could wish that such ambition for scholarship would take possession of larger numbers of student bodies in our high schools and colleges at the present time.

Mr. Sealey: The time has arrived for the noon hour recess. We have a full program for this afternoon and I want to urge all members to be back ready for work at two o'clock sharp. The Conference is now adjourned until two o'clock.

FRIDAY, 2:00 P. M., APRIL 8th, 1921

Mr. Sealey: Before we begin the afternoon session are there any questions or matters of business to take up?

Mr. Roemer: I wish to say a word in this connection. Mr. Cawthon has very well said that it is very desirable that we keep here on the general lines of purely professional work in the high schools; and our endeavor is to do this. It seems to me it would be advisable, in order to give point to our efforts, that we have a resolution committee, whose duty it will be to set up a few big fundamental things for which we stand. For example, if we could pass a resolution as to whether we shall go on record as favoring the 6-3-3 plan, then we would have a standard to follow through the year. I move that the Chair appoint a Committee of three on Resolutions, to draft such resolutions as it sees fit with instructions to bring them back here at the close of the meeting, and submit them to this Body for consideration.

Mr. Sealey: It is moved and seconded that a Committee be appointed to draft certain resolutions before we adjourn this Conference. The motion is carried and I appoint on that committee, Professor W. S. Cawthon, Mr. T. C. Frye and Mr. J. H. Workman.

Mr. Corr: I wish we could arrange for a High School Editor for a column in the "Florida School Journal." I wish this meeting could elect someone as head of the department of this section. I would try to furnish postage if there is no remuneration attached to it.

Mr. Workman: I move that Dr. Roemer and Professor Cawthon be the men for this place. They are better informed and know more about what is going on in the High School world than any of the rest of us.

Mr. Fillers: I second the motion.

Mr. Sealey: They could collaborate. It is moved and seconded that Dr. Roemer and Professor Cawthon be made joint editors of this department. It is unanimously carried and the gentlemen duly elected co-editors.

Mr. Corr: Thank you.

Mr. Sealey: We will now hear from the Committee on Mathematics, of which Mr. C. M. Jones is Chairman.

Mr. Jones: Mr. Chairman, Ladies and Gentlemen: I have been at work for some time on this report on Mathematics, and had it in fairly good shape on the way yesterday afternoon, but when I got off the train I lost my report. This morning I got up about four o'clock and worked until eight-thirty, four and one-half hours, and I am going to read you what I have. If the subject is not up to standard, you will understand the reason why. I am not especially claiming any originality for this; especially for the main part of the expressions found in this paper, which contain the best thought of the country, together with the experience which I have had. I may say in the beginning that in teaching Arithmetic in the first six grades, it is mostly utilitarian in value; then in the junior high school it tends toward the social, or more in that direction. However, I shall discuss that part later on. I have been especially interested in the questions that have arisen in the Science Section. Unfortunately, I was not here when the report was read, but I found that they were heartily in favor of General Science. I saw also that when the subject of Social Science was discussed, they were in favor of a General Social Science, and in discussing Languages, this morning, someone suggested General Language. As Mr. Sheats mentioned this morning, they want a year of Latin, a year of French or German and probably one of Spanish. This afternoon I am suggesting a course in General Mathematics. I do not know what is the next subject, General English, in other words, nothing specific. I think I shall be able to show you why it will be necessary to have General Mathematics. I am ashamed to say how many years I have been teaching Mathematics, both in the public schools and in the University, but only in the last three or four years I have been changing just

a little from my views, and I shall explain why I have changed. I was especially interested in Dr. Bristol's address this morning, in which he suggested that the high schools send to him pupils who could do a little thinking. It is a just criticism. There has never been so little thinking in the history of the nation, and possibly, the world, as there has been in the last two or three years. It is the age of a "Good Time." I want to say that I have suffered more in my high school work in the last two or three years than I have in the other fourteen or fifteen years in which I have been connected with public school work. I want to say one other thing, and I come to the question of senior high schools. We have one great trouble in the State of Florida. I never have seen such petty jealousy in all my life; for example, the financial condition of Polk County is practically zero. Only today I spoke concerning the misappropriation of funds. When I say "misappropriation of funds," I simply mean that every little school house on the hill plans certain things and sends them to the County Board, asking to be a senior high school. It is an unwise expenditure of money. As Dr. Norman said yesterday afternoon, many schools are not large enough for a certain number of languages. I know of one school in Polk County in which they have Latin, French and Spanish, and one hundred pupils. That is misappropriation of funds. This subject that I am to discuss will not in any wise fit these small schools. It would be hard for these small schools, provided the county had unlimited funds and resources, to do good work unless it was individual instruction. We could do that, of course.

REORGANIZATION OF MATHEMATICS FOR THE HIGH SCHOOLS OF FLORIDA

By C. M. Jones, Principal Perry High School

Pope said: "Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."

In discussing the newer ideas concerning mathematics, an attempt will be made as far as possible to be as conservative as will best harmonize with the best interest of the school. It may not be considered one hundred percent progressive, but at least it will be safe.

In this present age of practically no-thinking, it is my belief that we are searching more for royal roads to mathematics than we are for the truth. It is true that no-thinking on the part of the masses has developed great thinking on the part of the few. Children must be given a cushion seat in a Pullman, no day coach or freight train for them. This is characteristic of the age. At least it is true in the Lakeland schools, especially in the last two or three years. I do not believe that the Lakeland schools are any exception. This is an age of automobiles and flying machines. When they arrive at the end of the journey, they want to check their brains at the office and enjoy the evening. I am forcibly reminded of the story told by Coburn's Minstrel relating to the Lakeland Police Department some seven or eight years ago. Sam visited the doctor and stated that something was the matter with his brains. We are drifting too much.

At this particular time we are unable to present to you a course of study to serve as a working basis for the high schools of the State of Florida, as this yet requires work which has not been harmonized. Before this can be successfully done, there should be an agreement upon a few essentials to be used as a working hypothesis. In consideration of this fact, I shall attempt in a brief way to analyze these newer ideas which I trust will stimulate discussion out of which much valuable information will come to assist the Committee to some working basis. If the doctors agree, then the diagnosis is more complete and the application of therapeutics more scientific. The trouble today is that the doctors who teach and prescribe for mathematics in the way of application

to the pupils are mostly quack doctors. It is a fact that mathematics is more poorly taught than any subject in the high school. Until we have teachers who can teach, who have a vision which can only come by thorough qualification to teach the subject, who at least studied very carefully algebra, geometry, trigonometry, analytics, and the calculus, mathematics will not be what it should be. One of my teachers suggested that we have a survey. Why have a survey when you have incompetent teachers and you know you have incompetent teachers, and you further know that you cannot secure better teachers for the salaries paid? Yet according to statistics, twenty-two and one half times as much is spent for tobacco, cigarettes, snuff and a general good time. Where is the consistency?

My friends, I do not know of any one subject which elicits every variety of position from no units to four units as does mathematics. The quality and quantity of work will possibly never be accurately determined. What should be taught, how, to whom, and how much, are matters of much concern to the high schools of the State of Florida. However, it suffices to say that something should be done, when we find pupils in the high schools struggling with algebra, geometry, trigonometry, with no signs of progress when at least one half of their time is given to these subjects. There must be some changes. Certainly steps must be taken to eliminate this waste of time in the way of giving more thought to this new, yet old, study, suggestions, and solutions. This will not do any harm.

Since the textbook is secondary in conducting any recitation, may I say again that we shall continue to fail so long as we have incompetent teachers; teachers who are unable to make application; teachers who cannot properly interpret relationships to practical life. They teach this subject as they would some mysterious animal with horns. They appear complex, when as a matter of fact only a real teacher can take the child by the hand by being simple in terms used. How easy it is to cover a great multitude of sins by being complex, but there is one consolation, and that is your sins will find you out through the child, for he cannot be fooled all the time.

The real teacher will justify as far as is necessary each condition that arises in subject matter by a proper interpreta-

tion of its relationship to practical life. It is true it would be useless for me to stand here and say that we can find application to each proposition or problem in algebra and geometry. This cannot always be done with the child, but there are many cases in which application can be made and we must not permit the opportunity to pass by. Psychology to the young man or woman beginning to study this subject is found to be complex and without meaning, until applications of certain particular principles are made, then interest is stimulated. It is true with mathematics. If we use the slide in geometry to illustrate the square root, division, multiplication, he will possibly see in a little while its relationship to logarithms. While mathematics may assist you in reasoning upon other subjects or in other fields, yet this is not altogether the proper function of mathematics. It belongs to the traditional school. That teacher who teaches mathematics with this thought in mind, lives in the abstract world. Possibly I have found much pleasure in this abstraction and have taught much in the abstract world. It is largely a mistake. May I say it is a vital mistake with the large number of pupils, because they live in a concrete world. I have undergone much change in opinion in the last two or three years concerning mathematics. I believe that time and each item must be elements of consideration. I have heard a few "keepers" argue that geometry would enable you to use the fork and knife more scientifically. I suppose they had in mind that the shortest distance from the plate to the mouth is a straight line. Wonderful! And yet this is a type of teaching. We are not stressing mental discipline so much now as in the days past, notwithstanding that this is an item for a certain class of pupils.

The purpose and content must be changed in order that we may be more enabled to read in terms of practical relationship without loss of time to those pupils who are not peculiarly fitted for this type of work. I must frankly say that I have in the past required for graduation a completion of algebra, geometry and trigonometry. That was a few years ago, when the school was smaller and we could offer very few electives if any at all. Even with this, we are not justified. It is unnecessary for me to say that this is criminal in the way of lost time. Those who have had successful experience know that this statement is correct, and yet I am not so certain that

the study of all these subjects will be of advantage or include the wisest selection of knowledge for those who are not able to follow more advanced work later in life.

As you well know, in the traditional school, arrangement of subject matter has been in a logical order. The science has been anterior to the art, especially, not only in the study of mathematics, but in the study of English grammar and other related subjects. While many hold to the logical arrangement, yet the time has come when consideration must be given to economy in learning and effective control of subject matter. In order to maintain economy, we must have repetition, reviews. An inclusive set which will predispose the attention, focus available inner resources with an accompanying satisfaction to foster habit formation is a necessary condition which has not been given great consideration. If a child once sees the need or recognizes the need of any item, it is more readily learned, and by this I do not mean altogether "bread and butter" need, but psychological need. As soon as this need is recognized, then it becomes a laboratory course, so to speak, and he is able to differentiate and classify.

It is not necessary, as I said in the beginning, nor is it wise to compel all pupils to have a certain number of units in mathematics, because we recognize in the school many types of children; engineers, general readers, those who follow certain trades, and those who are peculiarly fitted for "pure mathematics." With these four divisions, I favor the elimination of any item, if its value cannot be conclusively shown to be in proper relation to other items and the time involved. Why waste the time of the general readers and those of the trades in proving that the square of the side opposite and similar propositions? Do you really teach these propositions to them and do they really learn them? My answer is that it is time wasted. Those who have had experience will verify this answer. How many pupils have quit school because of a few of these required units which could not be mastered by the child? You doubtless call to mind children who have sat in your classes and wondered what it all meant, and they were not lazy children, either. Then the question arises as to what we shall do with them. Give them arithmetic, and the four fundamentals of algebra and graphs. This will give them gen-

eral reading knowledge ability. Give this to them each year for a short period if necessary.

Give the engineers applied mathematics.

Give the socializers pure mathematics.

To small schools, I would recommend that they conform strictly to the above.

I have not given the college entrance requirements any consideration.

Lastly, give the pupils in mathematics as well as in other subjects a running brook instead of a stagnant pool from which to drink. We must bring to the public schools such teachers that the children may be able to drink from a fountain and not from a stagnant pool; the high school teachers do not know how to teach. I do not believe that I have ever seen papers arranged in such manner by people who are teaching, or taking the examinations to teach, by pupils in the seventh or eighth grades. I presume that for work in arithmetic they will begin on the answer and work back and see what they can find. We must find school teachers who are competent to teach the subject, then we shall be able to give you a proper classification; we shall be able to give you a course of study that cannot be broken. I notice they made the same charge this morning in Latin. It is true. I have taught Latin for a number of years. I do not think I ever heard in my life a more complete presentation than was presented by Mr. Metcalfe and Mr. Buchholz this morning; it was fine; it showed existing conditions and showed that they actually knew the needs, and what was the charge? If not direct, it certainly indicated incompetency in teaching the subject.

Mr. Fillers: Is there any discussion on the subject at this time?

Mr. Norman: I want to present and call attention to a piece of mathematical apparatus made by Mr. R. L. Hamon of Teachers College for demonstrations in Geometry and Trigonometry.

Mr. Fillers: Any further discussion?

Mr. Sheats: I think we should adjourn from work and play a while. How long are you going to carry this on here?

Mr. Cawthon: We are going to carry this on until we finish it. There seems to be a disposition among a considerable number of our teachers, to treat the graph, in Algebra, very

lightly and even to omit it entirely. It is only now and then that the visitor finds pupils using the right kind of squared paper. Time is frequently wasted in ruling paper for use in plotting curves.

I have here a tablet costing from five to ten cents and containing enough squared paper for all the graphical work necessary in the two years' course.

As for unified Mathematics, I favor it for the ninth year for schools organized on the eight-four plan. For those who do not go to college, such a course would furnish ample preparation in Mathematics, for the affairs of practical life. Pupils desiring to prepare for college could obtain all necessary formal Algebra, Geometry, and Trigonometry in the Tenth, Eleventh and Twelfth years of school. These pupils would have nothing to lose by the proposed rearrangement of the course, while pupils not preparing for college and those not successful in the study of abstract Mathematics, would have much to gain.

I have a letter from State High School Inspector Foster, of Iowa, replying to one addressed to him on this subject. He says, in substance, that the greatest drawback to the new Mathematics is the lack of a proper viewpoint on the part of many teachers of Mathematics in high schools. He says further, that the new treatment is gaining gradually, within his state, and that within five years it will have a strong foothold in most of the high schools.

Mr. Fillers: That is splendid. I had the pleasure of teaching Unified Mathematics in the Illinois high schools. It is a splendid course, and since that time we have worked out a number of excellent textbooks in the field.

Mr. Corr: I want to add my endorsement to what has been said about the subject. I worked with that for several years, but the State Uniform Textbooks knocked me out.

Mr. Draper: Before I start I want to say a word or two. Our State Superintendent landed on us this morning with both feet for deserting our posts and bringing our schools up here to take part in athletics, and now he wants to adjourn before the meeting is over and go out to the Athletic Field to see the Track Meet. I think we might as well be good sports and come clean on both sides of the fence.

It seems that the general tendency of this Conference has been more or less pessimistic. We all know that there are a great many untoward conditions existing at present, but I want to say here and now, that if we have any criticism to offer on any situation whatsoever, that may arise, we should at the same time try to offer some sort of remedy. Several years ago there was a lady in Chicago who stated that high schools, and schools as a whole, were a failure, but she never offered any remedy. She simply made lots of criticism, but offered no remedy. I think at this time we should offer some remedies.

REORGANIZATION OF VOCATIONAL WORK IN THE HIGH SCHOOLS OF FLORIDA

By S. A. Draper, Principal Leesburg High School

Purpose and Nature of the Report

It is the purpose of this committee to report to this conference its findings as to Vocational Guidance as a part of the public school work in other parts of the country and to offer something of a plan of action in our state.

We wish it to be understood that many of the ideas set forth are not original with us but are offered as gleanings from many sources of information that have presented themselves to us as we have studied the subject.

We again wish to make it plain that the arrangement of this report is so designed as to intersperse argument with chart, outline and plan with the hope foremost that we will be all the more able to "put it over" on the one who most needs to become acquainted with the fact that we are urging a very patent need. We mean, the teacher, principal, superintendent, official or business man who is perhaps entirely unacquainted with such movements and have little, if any, sympathy with them.

Discussion

Vocational Guidance, as a branch of the public school system, has only recently begun to develop. In the last few years, it has been widely discussed with a rapidly increasing interest.

In the year 1910, the first conference was called in Boston for the purpose of discussing this subject.

Since that time wider and deeper interest has been shown as regarding this work until we find today that it has grown, in the estimation of school people and others, into a matter of importance and not to be ignored as a vital part of school activity. Many of the larger cities, as New York, Boston, Chicago, Philadelphia, St. Louis, San Francisco, and others, have adopted plans which bear the names of the cities in which these plans have originated. So successful have these plans proven that smaller places are also working out methods looking to the same end and within a very few years no school will be considered at all modern unless it has incorporated this work into its schedule.

Vocational Guidance, as a term, has been misused, misunderstood and misapplied. It does not mean choosing a career for a child or a child for a career, but it means the placing of every needful and helpful agency within the reach and grasp of the child, so that he may the more intelligently choose for himself a life activity. It means, too, studying his attitude toward the various lines of endeavor which may engage him. It means studying his desires, tastes and aptitudes. It also takes into consideration the sources of all information possible to be obtained for his own profit and the use of the parent, all of which is still put forth as an enlargement of the narrower and more circumscribed meaning of the term. The wider meaning will be set out later in this discussion.

Such activity will naturally develop from many different angles and along many different lines. No one factor may be taken as decisive, nor will the child, only, be thought of in this connection but the parent as well.

Both parent and child are to be reached, interested and aroused to the point that the child may not drift into an occupation for which he has no liking or training.

The parent, as well as the child, should be consulted and informed as to the sources of training for the line in which the child is interested. The income from a stated occupation might and should be discussed, together with the possibilities for individual achievement.

Personal consultations should be held with the student about his choice and such encouragement and advice given as will make it possible for him to keep in mind the end and aim of his ambition. Employment might be secured for some

classes of students while they are still undergoing training but this is only a small part of the work to be done.

One of the chief aims of this part of the educational endeavor is to aid the student in fitting himself for a course in life and so fitting him that his fitness is not one-sided or unnatural but normal and complete.

The school will need to be well equipped and fitted up with the best of teachers, teachers trained as to all points and thoroughly in sympathy with this movement in order that this movement may go forward unimpeded and yielding the measure of profit it should.

In most places where this class of work has been done, it has developed in the placement of students who needed help in remaining in school and sometimes those who were compelled to leave school altogether. In making placements it soon became apparent to those making them that the high school graduate, and often even technical graduates, needed direction almost as much as those who could not complete their studies, when it came to a matter of intelligently choosing a trade, occupation or profession, so the practice of helping students make such important decisions has been growing among the better class of teachers for several years but the work has been done more or less desultorily and altogether voluntarily until very recent years.

The demand for this extra function of the school is now very pronounced and it has become a task of no mean proportions for us to outline a plan that will meet the growing demands and immediate needs of this state.

It is needless for us to say that conditions in Florida are vastly different from those in New York, Massachusetts and others of the densely populated industrial states and the question of preparing a course of action calls for many changes in their plans. So many changes, in fact, must be made that it appears to this committee that there is scarcely anything in their curriculum which will fit us unless it be the generalities.

Several plans have presented themselves as being fitting and feasible, viewing the situation in Florida as a whole. It will be our purpose to set these forth more or less completely as we proceed.

Suggestions as to a Beginning

Preliminary to a start it ought to be that every public school teacher, beginning with those in the fifth grade and going up through the high school, should take several months' training along this line, through some source or other, so that the work in all departments be correlated the more easily and perfectly.

Each county should be organized to such an extent that every child be in touch with the work and come as thoroughly under its enlivening influence as possible. The child should come in touch with its various phases through the teachers, exhibition work, lectures, books, reports, charts, magazines and through the various business organizations in the neighborhood.

Each school should have its committees of teachers and older students gathering information as to all trades, professions, occupations and business in their neighborhood and elsewhere.

These committees would gather information regarding:

1. The necessary qualifications and fitness of students will be considered in testing for entering any of the learned professions and skilled trades in the state or other part of the country.

2. The opportunities offered to young people by the state or local community. The expense incurred, the time taken for qualification in a given line, trade, business or profession will be considered together with the place of training.

3. The average remuneration, the prospect of advancement, the relative permanency of employment in a given service, and the desirability of such occupation, profession, or trade, from a social and ethical standpoint.

Line of Approach

In laying the ground plan for properly guiding our youth it is absolutely sound doctrine and strictly fundamental that all approaches to this work be definitely and correctly laid. The teachers, first of all, must be the type to arouse and hold the respect of the youths whom they direct. They should know that the more pointed and purposeful their work is to them the more pointed and purposeful it will become to those whom they instruct.

As has been stated elsewhere, from the fifth grade through the rest of the school all classes of instruction should have some goal or station of attainment. Every subject, as Arithmetic, can be so vitalized and enlivened by careful preparation that it will become more interesting and attractive to the average student than it is usually regarded as being. Writing must be taught as a subject of real use and importance, so with Drawing, Spelling, History, English, Reading, Geography and Music. In such subjects as Drawing and Music, the student may have his interest quickened and deeper ambitions aroused by tactful direction. These subjects may be taught as direct branches of development. The student may learn Drawing as a business. He may teach it or employ it in some other way. It is the foundation of many different trades and professions. Music may be taken up in the same way. The pupil may train for teaching, for the lyceum platform or stage.

In many of the states where this class of work is being done the student is furnished with books and pamphlets for his own use, such as, "Openings for Boys in the Machine Shops," "Vocations for Girls," "Vocational Adjustments for the Children in the Public Schools," "Choosing an Occupation." All of which are very practical, written for practice by practical people and are full of the kind of information that sticks, which, by the way, is the only kind of information any department of our schools has any business to offer.

The student should be required to study carefully, from every angle possible, the salient points of the vocation of his choice, writing papers regarding his choice and in favor of it and to secure the opinions of others, whose judgments he respects. Then, again, he should be required to look at the opposite side and to make the necessary comparisons so that when the time comes for him to enter seriously upon his chosen work he will have laid the ground plan and be already far afield. In doing this he should outline:

1. His own desires and those of his friends and parents.
2. He should set forth the reasons for his choice and be able to give the sources of his information, whether from books or from personal observation.
3. He should study his characteristics, comparing them with those already engaged in a like occupation, or the same,

and show that he has certain personal prerequisites which peculiarly fit him for such a course of endeavor.

4. The skill, training and knowledge necessary to fill such a position.

5. The names of the schools to be attended, where located, and the cost of preparation.

6. The end of it all, its possible rewards, his own spiritual gratification and ultimate development.

All of which leads us to the statement that this line of endeavor in the schools is only another one of those methods that all real schools and school systems sooner or later adopt in order to make a greater social asset of the child, to fit the world to the child and not the child to the world as has so often been attempted in the past and at such great waste of child power, or wealth, whichever term you choose to use.

Society has never recognized as fully as it should that the child is the future citizen, and as such, is the being most to be considered in all plans that are laid for the betterment of present or future conditions.

Every step must be carefully thought over before it is taken and having been taken it must needs be that it is a step unhesitatingly forward, leading toward a greater perfection of social estate.

If, by the expenditure of a little time and money, it may become possible to alleviate, even by so little, some of our educational and social troubles, it will be well worth all it costs and if we be the means of paving the way to greater progress we must feel that our reward is in the doing of even that small part.

This work of guiding and directing youth in finding itself is, and has ever been, largely a matter of inspiration. The boy fixes for himself some ideal, sometimes consciously but more often unconsciously. Always it is a composite of his experiences. The little boy riding a stick horse and firing wooden guns at imaginary Indians is only acting up to his latest ideal. If a few days later he dons a high hat, puts a pair of glasses upon his nose and goes out hunting the sickest doll in the neighborhood, that he may cure it, he is in embryo his own latest hero.

As with children, so with grown-ups. Standards are erected from the most attractive material found in our daily

experiences. So, much work done in this branch of instruction must be of the nature to appeal and attract. Much may be accomplished by charts and other means of giving visual point to many lessons.

The accompanying chart has served to make the argument clear to classes of both sexes that honest, direct, forceful effort is just as much to be desired today as at any time in the world's history, much piffle to the contrary notwithstanding.

This chart emphasizes the importance of industry and the fact that real aggressive business qualities are as attractive to the average business man now as ever they have been. The main idea being that the average goal for the average man is a position which may be reached through medium application, aggressive ability and unbounded optimism. Advancement beyond position is made through more or less highly technical training coupled with the former characteristics, and this chart is designed to push the halting but able young man out into the less tried fields of greater endeavor than is attempted by the majority of his fellows.

It will be noticed that, in framing this chart, there has been no effort made to stress the special training to the hurt of the wider general education for it seems to us that we are in great danger, as a whole people, of neglecting the education that widens and deepens the nature and is the agency through which the social foundation is laid upon fundamentals and not upon the narrow self seeking basis of the man who educates in order that he may make more money. We realize that a wage earning capacity is one of the aims of all education but it is not, and should not be, the end.

In the very beginning of this republic the people began to lay the foundation for the education of their children and they deliberately mapped out, in the only way known to them, the route through which their aims might be attained.

Our day is different from theirs in the vastness of our population and social complexity. Where our fathers had one problem we have a dozen but we must never lose sight of the fact that we have come into our heritage by virtue of their foresight and fundamental building.

We need to be just as deliberate as were our fathers in that we undertake to assure to our children after us something of the heritage left to us. To do this, we must make

CHART NO. 1

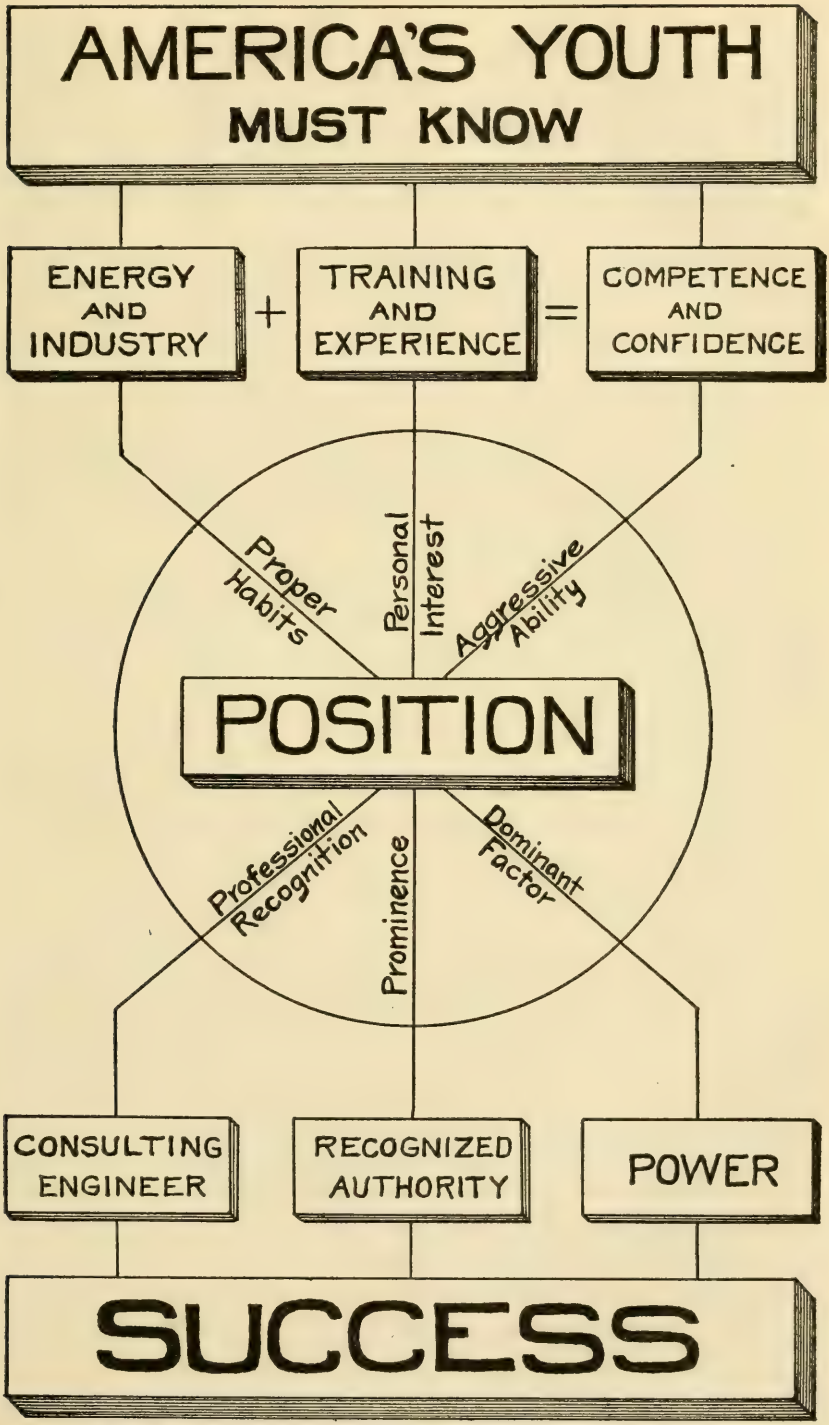


Chart No. 1. Made by eighth grade student as one of her studies in freehand lettering.

use of every agency known of a useful and legitimate sort to aid coming generations to forge ahead. We will take into consideration the more than five hundred recognized branches of endeavor and urge that every citizen of either sex make an unhurried but thorough and adequate preparation for the occupation of his choice.

We will remember that there are, in round numbers, in this country, more than 45,000,000 people engaged in gainful occupations and that many more are coming into the field of action every day.

The field is widening constantly.

New lines of endeavor are opening with every round of the clock and as the population grows the social complexity increases and new methods of business are being formulated to meet the kaleidoscopic changes in our social fabric.

We cannot be behind hand.

We are indebted to our youth for its well being and our system of taking care of it is so old and absolutely inadequate that radical changes are essential in every department, and the most vital question with this body today is just what shall be done to remedy our most dangerous faults.

In considering ways and means of approaching the question and the best manner of dealing with it, we must remember that the higher function of the school is to produce two parallels:

1. The citizen.
2. The child, fully rounded out, as to every faculty.

Now, as never before, the school authorities and educators generally are realizing that this two fold mission of the schools must be carried out, that the schools meet the demands of society in all respects and it is apparent to those at all interested that this can be done only by the adoption of a program which is framed with this end in view.

This program must set for its standards three objectives:

First, the necessary knowledge and skill coupled with a thorough discipline;

Second, a full knowledge of the state and a full understanding of civic responsibility;

Third, such occupational training, skill and practice as will fit the child for as great a degree of efficiency as possible.

Such a program will necessitate many changes in the present day procedure and can be made effective only by promoters who believe in it and are thoroughly conversant with the need for such a program.

This program must be fostered by the community, state and nation, for these are the units under which it will operate.

When this program has been fairly launched, we will have taken the first forward step in an educational way that has been taken in the last fifty years. During the last five decades we have been looking backward, like the Sphinx of Egypt, upon a past perfection. For we understand perfectly that the old program was good in its time but that time is not now.

The second step forward will be taken when it becomes possible for those who are entrusted with the work of carrying this program into operation are enabled to live by the fruits of their labor and are raised in their own eyes and in the eyes of the world to the simple dignity of common citizens.

Teaching must be recognized as a more determinate factor in the life of this nation than it has heretofore been regarded to be.

The business side of teaching is so pitifully unbusiness-like that it is repulsive and unattractive to the young, vigorous youth.

We cannot conscientiously urge teaching as an occupation, notwithstanding the fact that it is the greatest of the vocations, results, sacrifices and earnestness of purpose all taken into account.

One of the large outstanding aims of this new program is to professionalize the occupation of teaching and to make it more attractive to the young person with predilections in that direction.

The new program must be so framed as to look to the task of revitalizing the school system and of bringing new life and vigor into every division and shall be broad enough in its scope to cover all allied activities.

When the war came, we found that twenty-five percent of the youth in this country could not read or write.

Our program must remedy this defect and look to the absolute eradication of total and consummate ignorance. It must accept the task of Americanizing that long list of red, illiter-

ate, vicious, foreign malcontents who have no reverence or respect for our flag or institutions.

This can be done.

No task needs more to be accomplished and no educator will admit it to be impossible but it cannot be done by small, niggardly methods.

The schools must be made more popular, and they can be made more popular when they are enabled to serve more people, and it is through this one activity of Vocational Guidance that we expect to reach and serve a greater number.

Having now laid down the broad general outline and set forth the reasons for such outline of a broader service on the part of the schools, we will concern ourselves from now on in the discussion with ways and means of approaching the work of directing and prompting our youth in rounding themselves into men and women and particularly as to:

Citizenship;

Mentality;

Morality;

Spirituality;

Physical well-being;

"For if these be in them and abound, they make them that they shall be neither barren nor unfruitful."

Now, the entire child must be fed.

We dare offer no half-way measures in these days, most especially in launching a movement of this sort.

We wish to steer clear of fads, foolishness and frumpery. We have had too much to do with these triple sisters of waste and extravagance. Our needs are too great and position too insecure to warrant long drawn out and costly experiments.

The one great end to be achieved in education should be a balanced product, and our chief concern should be how to produce it.

We believe that the study of English and History, when properly pursued, are the vehicles through which much may be done in the way of training in citizenship, for in developing the mental and spiritual side we have already made free use of English. This subject lends itself to this project in all of its phases. Biography is an inspirational subject that presents an inexhaustible supply of material and the same may be said of history. These two subjects presented along

with pertinent displays, charts and outlines are to be regarded as the safest and sanest route to the desired results.

Much has been said about the manner of presenting the religious and moral side of education to the child. We give here a chart or exhibit which has been used in teaching a class of boys and girls some of the principles which we believe should actuate men and women in business. It will be noticed that the clippings presented are taken bodily from a magazine published in the interest of the sales fraternity and shows very forcibly the kind of sentiments this publisher holds as to certain qualities which good salesmen should possess and he incidentally impresses the same lesson upon all business men.

The chart has been used frequently in the Leesburg schools in lectures and talks to both boys and girls and we urge the use of many similar exhibits in all of the schools.

EXHIBIT No. 2

Used as a part of lecture course on business morals and religious development.

"SEEK FIRST"

By ARTHUR NASH

"Seek ye first the kingdom of God, and His righteousness, and all these things shall be added."—Matt. 6:33.

Through all the ages man, preacher and priest have stuttered, stumbled and been shipwrecked on the rock of this fundamental truth.

The reason seems to be that they have read the text, "Seek ye first a passport and ticket to the Sweet By-and-By and all these things shall be added."

Where Is This Kingdom?

Jesus tells us to pray: "Thy Kingdom come, thy will be done in earth as it is in heaven." The promise is that when we have found the Kingdom, our food, drink and clothing will need no thought, "all these things shall be added."

What Is This Kingdom?

Paul tells us the Kingdom we are to seek is "righteousness and peace and joy." In our modern language it can be expressed in two words, "social justice."

When Shall This Kingdom Be?

When each of us in our daily lives, whether in home, factory, church or school, fulfills the righteousness of God.

The Kingdom of God, a social order where God's will is done as it is in heaven, is the Utopia of Jesus, and in the Utopia of all seers and prophets there is no need of worry about food or clothing, because social justice exists, we all have our just share of the free gifts of God.

EXHIBIT 2-A

A DIAMOND MINE WITHIN YOU

By JESSIE L. BRONSON

Have you never seen a farmer grubbing the rocky surface of some hillside farm, eking out for himself from the thin soil a scanty and laborious livelihood; longing possibly for wealth and opportunity, while all the time underneath him there lay a gold mine that could make him fabulously rich?

Many people merely scratch the surface of life and grumble.

There are precious stones all about, but it requires the pickaxe of perception to unearth them.

Yet the beauties of nature are but a penny sample—God's advertising sheet—just a poster display of the real performance inside.

For there is an inside as well as an outside to life, and the inside is vastly the more beautiful. Everything has a soul, even a sunset. There are "wonders in the deep." Would you obtain the finest pearls you must dive for them.

The Lord has arranged a little game of hide-and-seek for His children. All sorts of treasures are hidden away in unexpected places, and always the most precious things are the most carefully concealed.

Life is one vast mine, and we the miners. The finest diamonds of life don't lie about on the surface. Get your spade and go to work.

If you have difficulty in opening your mine, apply a little mental dynamite to your old ideas and notions.

You will strike only a vein at first, but follow it long enough and it will lead you direct to the mother-lode. And then you will discover that there is but one gold mine in all the universe—your gold mine, my gold mine, and our neighbor's as well. Be sure to carry the torch of the spirit as you descend, else you will never discover your treasures.

Don't spend your life in poverty when within your soul there lies a diamond mine.

The man who will lay out for himself each day a little more than he thinks he can possibly do, and then works as though there was not going to be any tomorrow, will soon find himself developing a most surprising capacity for work.

EXHIBIT 2-B

FIGHT OFF LAZINESS

By B. C. FORBES
Editor, Forbes Magazine

Just now I ran into a number of down-at-the-heels men delivering heavy bundles of telephone directories. The other day I talked with the man at the head of the telephone business in this country.

The delivery men earn perhaps $3 per day, and earn no more.

Theodore N. Vail has a six-figure income and doubtless earns far more than he receives.

Why the difference between the two types of men?

If one could get at the bottom of the failure of a delivery man to make headway in the world, the real reason would probably be found to be laziness. Hardly one of this class of men works regularly. They are a shiftless, thriftless lot. Most of the men, I noticed, were sorry looking specimens of humanity.

Laziness has more to do with lack of success than is generally recognized.

As my mind goes over the careers of our most successful men of affairs, one fact that rises up clearly is that these men were the very opposite of lazy.

I do not believe one self-made American millionaire has worked as little as eight hours a day.

It is not uncommon for big men to work, and work at full pressure, not eight but twelve, fourteen and even sixteen hours a day.

Among extremely hard workers that flash into my mind are James A. Farrell, president of the United States Steel Corporation; Thomas E. Wilson, the packer; Charles M. Schwab and Eugene G. Grace, of the Bethlehem Steel Company; H. P. Davison, Thomas W. Lamont, E. R. Stettinius, all of J. P. Morgan and Company; George O. Muhlfeld, of Stone & Webster; Thomas A. Edison; John G. Shedd, of Marshall Field & Company; Percy H. Johnston, Harvey D. Gibson, Charles H. Sabin, Frank A. Vanderlip, Lewis E. Pierson, Charles E. Mitchell, James S. Alexander, all New York bankers; John H. Patterson, head of the National Cash Register Company; Edward L. Doheny, the oil magnate; Walter C. Teagle, president of the Standard Oil Company of New Jersey; William Randolph Hearst, the publisher; Coleman du Pont; Cyrus H. K. Curtis of Philadelphia; Robert Dollar of San Francisco; Earl D. Bapst, of the American Sugar Refining Company; Henry Evans, the noted insurance leader; Irving T. Bush, of Bush Terminal fame; Henry L. Doherty; George M. Reynolds, the Chicago banker, and J. Leonard Replogle, the steel master.

And, looking backwards, there were few harder workers than Theodore Roosevelt, Edward H. Harriman, James J. Hill, Philip D. Armour, Gustavus F. Swift, Cyrus H. McCormick, Commodore Vanderbilt, Stephen Girard and, in his active days, John D. Rockefeller.

And the same thing is true everywhere. Take your own home town. Is there any really big man there—any man who has worked his way up through his own efforts to local leadership in any line of business, and is still in active service—who is not an unusually hard worker? Or who was not a hard worker, at any rate, until he had earned by years of early-and-late effort the right to relax a little now and then?

If there is he must be the only one in captivity.

A man may be a born genius, but if he will not exert himself, he can achieve little.

Laziness is fatal to success.

History contains few instances where sluggards have risen to the top.

In selecting men for positions an employer will give preference every time to a man of ordinary intelligence but extraordinary diligence than to one of greater intelligence but lacking in diligence.

EXHIBIT 2-C

THE MAN WORTH WHILE

By W. H. WALSH

The man worth while is the honest man;
Honest in thought, in deed, in plan;
Who speaks the truth where truth would serve;
Who scorns the false; who has real nerve;
Who will fight for a friend and walk a mile
To serve him, if need be, once in a while;
Who measures his conduct from day to day
With an eye to perfection rather than pay;
Who knows not deceit nor hypocrisy's guile;
Who is eager to serve the world and smile;
Who is simple and frank and plain as well;
Who abhors a sham and is quick to tell
The fraudulent, canting, treacherous wight
From the open, ingenious, trusty knight;
Whose word is his bond, whenever given,
As good, in fact, as though writ in heaven;
Who sees the whole truth in poetry writ;
Whose life work, indeed, is governed by it.
That "our acts are our angels, of good, or ill,
Our fatal shadows that walk by us still."
Who is "first in war"; the same in peace;
Who's a power for right till wrong shall cease;
Who in face of calumny still can smile,
And be generous, too—that's the man worth while.

EXHIBIT 2-D

THE MAN WHO DELIVERS THE GOODS

By WALT MASON

There's a man in the world who is never turned down, wherever he chances to stray; he gets the glad hand in the populous town, or out where the farmers make hay; he's greeted with pleasure on deserts of sand, and deep in the aisles of the woods; wherever he goes there's the welcoming hand—he's The Man Who Delivers the Goods.

The failures of life sit around and complain; the gods haven't treated them white; they've lost their umbrellas whenever there's rain, and they haven't their lanterns at night; men tire of the failures who fill with their sighs the air of their own neighborhoods; there's one who is greeted with love-lighted eyes—he's The Man Who Delivers the Goods.

One fellow is lazy, and watches the clock, and waits for the whistle to blow, and one has a hammer with which he will knock, and one tells a story of woe; and one, if requested to travel a mile, will measure the perches and roods; but one does his stunt with a whistle or smile—he's The Man Who Delivers the Goods.

One man is afraid that he'll labor too hard—the world isn't yearning for such; and one man is always alert, on his guard, lest he put in a minute too much; and one has a grouch or a temper that's bad, and one is a creature of moods; so it's hey for the joyous and rollicking lad—for the One Who Delivers the Goods!

EXHIBIT 2-E

Brotherhood is fraternalism. The only eternal "ism" is fraternalism. It is an era that utilizes all other eras in the evolution of its own maturity. Under the fostering care of both the sunshine of prosperity and the storms of adversity, it sinks its roots deeper and deeper into the earth-bosom of eternal principle, spreads its branches wider and wider with increased revelations of truth, until ultimately beneath its shade shall be the sanctuary of man's happiness, and over it on heaven's clearing sky, in the myriad glistening colors of the bow, is written God's everlasting covenant with men: "Inasmuch as ye do it unto one of the least of these, my brethren, ye do it unto me."—*Alden.*

EXHIBIT 2-F

SELLAGRAMS

By FRANK FARRINGTON

It is an exploded theory that a good salesman is one who can sell a man something he does not want or need. Perhaps a good salesman could do that, but he would not.

It is a wise salesman who knows what to say and when not to say it.

If you show your goods with a "Take it or leave it" air, you will find that they generally leave it.

You may get to telling your story in a mechanical way without knowing it. Get somebody to check you up on that. Nobody falls for that machine-like style any more.

If you ever expect to come that way again, don't promise more for your goods than they will perform.

Don't do all the talking. Give the customer a chance to speak once in a while. He may want to say, "I'll take that."

The gift of gab may be a wonderful thing but unless you curb it, you will make your prospects too tired to handle a fountain pen on the dotted line.

If you cannot make sales without cutting the price, it must be that you are not making the quality look good enough.

Salesmanship is nothing you are going to pick up some day ready made. You will get it by hard study and the practice of what you learn.

Never be tempted into telling prospects your troubles. Instead listen to theirs when you think it will gain you their good will.

Don't be so anxious to make a sale that your customer will notice that anxiety. Anxiety on your part will breed caution on the customer's part.

The old fashioned, insistent, persistent type of salesman may bully a few people into buying, but he will weary more into showing him the door.

EXHIBIT 2-G

YOU CAN DO IT

By A. H. DUDLEY

Only four little words—
"You can do it."

But if you would take them for your motto—pin them on your wall, paste them in your scrapbook, wear them in your heart, you would find them a luck-piece, a charm against failure, a token from Mistress Fortune, or, if you will, a spur and a goad to achievement.

Only four little words—
"You can do it."

Yet in the realization of them men have extended boundaries, dethroned kings, shattered empires, and built up new states. They have made deserts bloom like gardens, and mountains to give up their treasures.

Nineteen centuries ago the Wisest Man who ever walked the earth gave us the key to the fulfillment of our desires, the very secret of success—and it was this:

"As a man thinks in his heart so is he."

If you think you are beaten, you are beaten. On the other hand if you believe in your God-given strength to stand on your two feet and fight your battle to the end, you will come off the field victor. You have only to acknowledge the majesty of your personality in order to have men follow your lead and accept you at your true valuation.

As you climb you will meet men old in years and failures who will warn you to go slow, not to bite off more than you can chew, and that the thing you seek to accomplish has never been done.

But you remember—
"You can do it!"

In your being is the power to perform miracles, to achieve yesterday's impossibilities, to realize every dream you've dreamed, to create even as the Father created in the beginning. There is no thing in heaven or earth that can say you no or swerve you one inch from your course, if you will work and believe—

YOU *can do it.*

EXHIBIT 2-H

EXHIBIT No. 3

When children realize that hard headed business men feel the need of a stronger, saner morale they will be much more easily guided and lessons of this sort will have much more weight than they would have if presented merely from the side of the teacher.

Again a poster or exhibit containing the pictures of present day men and women, clipped from magazines or otherwise obtained and presented in the manner here shown will have an inspiring effect and help students in obtaining a better perspective of business life and cause many of them to investigate the lives of the people shown.

"NO SURRENDER!"
The Slogan of the Winner

Photograph of
Dr. S. Parkes
Cadman

Photograph of
Former
President
Taft

Photograph of
William B. Joyce

Photograph of
Peter Clark
MacFarlane

Photograph of
Will
Irwin

DO WE WANT TO BE IN
THEIR CLASS?

(Exhibit No. 3. Reproduction of a poster, 20" x 26", using actual photographs, made by a ninth grade student as part of a corridor exhibit.)

CHART No. 4

CHART SHOWING OPPORTUNITIES FOR TRAINING

SCHOOLS FOR MEN

Name	Subject	Special Features	Admission Requirements	Tuition	Length of Course	Rating	Field

SCHOOLS FOR WOMEN

Taken from chart made by high school students in Leesburg High School.

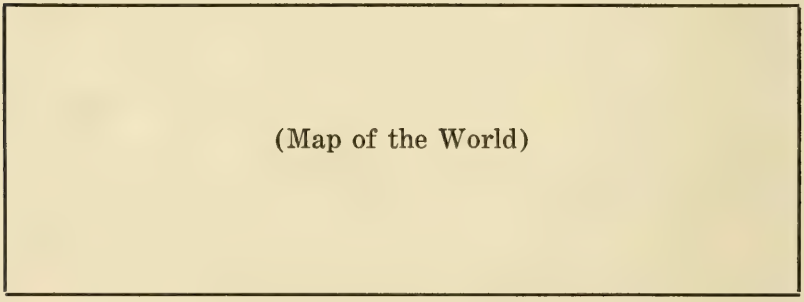
EXHIBIT No. 4

Another chart will show in detail and at the same time in a condensed form the names of schools giving certain classes of instruction, the cost, the length of time taken, where located, demands for, fields of operation, ratings, advantages and possible limits of development.

EXHIBIT No. 5

This chart is taken almost bodily from exhibits given by the Vocational Guidance Bureau of Boston and is one of the best known ways of presenting the information in a more or less digested form.

The next set of exhibits were designed and constructed by the ninth grade of the Leesburg High School as a set of exhibits for the halls and corridors of the building. A teacher would explain, to pupils wishing to know what it all meant, the purpose of the cards and the meaning of the various groups, telling general facts as to the people whose pictures appeared in the grouping. This method of conveying an inspirational message was found to be very effective and the school plans next year to do quite a good deal more of it. In this way all visitors to the buildings get something of the spirit of the movement and they aid quite a great deal in keeping up interest by discussing many of the features of the exhibition.



(Exhibit No. 5. Reproduction of a poster, 22" x 27", using actual world map, made by first year high school students as a part of corridor display and used as background for talk on choosing a career.)

Mr. Sealey: Any discussion?

Mr. Bristol: I want to shout, say "Amen," or "Hallelujah." That is fine. That kind of a program is what I had in mind this morning, something along that line, and along with that, we can get in a whole lot of Economics, and we can get the boys and girls to thinking. Take the difference in wages; give the course without labeling it Economics. We can get the thing in the high school we are all wanting without any label. I think that is just fine.

Mr. Sealey: How much time should be given to this work?

Mr. Draper: It should be given over a five-year period of time. It seems to me that we have in our schools and curriculum a place for Ethics. I think that feature of the work should be added and more attention paid to it. We have very few people paying any attention to that kind of work. We do not want to overdo it, of course, and go to the other extreme. It is going to be hard to determine and specify the amount, but enough should be done so that our children shall be satisfied with what they are going to do. I want to recommend one book by W. O. Weaver of the Y. M. C. A. Schools of New York, "Choosing an Occupation." Also "Vocations for Girls," by MacMillan Company, is a worth while book; and then Clark's "High School Boy," by MacMillan Company, is very good.

Mr. Sealey: Do you think that it is best to connect Vocational Guidance with other subjects of the high school curriculum?

Mr. Draper: The Boston Vocational School has developed a school with their children into a one-sided affair. They are revising their program, and making it much more general. A few weeks ago we had a young lady from Red Bank, New Jersey, wanting to enter the twelfth grade. Her record card showed that she came from the Vocational School of Red Bank, and she had no English, no History, had been in three years of school, but had no History at all and no English except General Grammar. She had Spelling, Writing, Arithmetic and Bookkeeping.

Mr. Wilson: Your report was on Vocational Guidance, not subjects, but I want to know something definite about the establishment of a business course. The question came up in

our school, and I would like to talk with men who have had experience along that line.

Mr. Roemer: I would recommend the N. E. A. Bulletin on that subject.

Mr. Haynie: Vocational Subjects—Mr. Draper has only touched upon the subject of Vocational Guidance. Our educational system is now confronted with vocational education covering three subjects, agriculture, home economics and trades and industries. Under the Smith-Hughes Act of Congress, 1917, money was set aside in proportion to the population to assist in the promotion of this type of education. This form of education has been established in some of the schools of Florida for the past three years. One of the previous speakers has mentioned something of material interest to me, and that is, how the vocational subjects will fit into the academic curriculum in our schools. In the trade and industrial subjects there is not the necessity for the correlation of academic subjects as trade and industrial subjects are taught only in evening classes composed mostly of adults. Home economics and agriculture are placed in our standard schools as an elective. The requirements in academic subjects are four years in English, two in history, two and one-half in mathematics and at least two in science, following the state requirements. In every instance there should be taken three academic subjects besides the vocational subject. Vocational education does not mean the limiting of cultural knowledge, but does mean the making of a well educated boy or girl with some special training toward a vocation.

There is to be a part-time law enacted in Florida that will require pupils out of school under the age of eighteen to attend a vocational class wherever offered at least four hours each week. There are many boys employed in the industries that would be available for this type of education. In some instances the employers of these boys have signified their willingness to pay their boy employees for this time spent in vocational training, as it will improve the working forces in their plants.

I wish Mr. Draper or some other committee would make a study of these three vocations so that they would receive their proper place in our educational system. We wish vocational education to be considered as an integral part, the

same as Latin, English or any other subject. It is time that we begin to give some special attention to this work as the schools are increasing each year and in a few years we hope to have these schools equally distributed over the state.

Mr. Corr: The important thing is vision. Vocational Education is running upon the rocks. A bill will be introduced in Congress calling for a most rigid account of the expenditures along vocational lines; of the amount of money expended in Florida on government supervision; what per cent of that money is going for state supervision, and what per cent is going toward the work itself.

Mr. Haynie: The great expenditure has been in rehabilitation work with the soldiers. This phase of vocational education was put under control of the Federal Board for Vocational Education but has nothing to do with vocational education in our secondary schools. There has been quite a bit of criticism of the way the soldier bureau has been run. It is certain that this rehabilitation of soldiers will be taken from the Federal Board for Vocational Education and put under a special bureau. There has been no criticism upon the appropriations for Smith-Hughes vocational education as it relates to our regular school system but there has been a fight over the amount of seventeen millions of dollars to be used for the rehabilitation of soldiers.

Mr. Corr: I am most heartily in favor of vocational education. For years I have been making it a point to try and find out the aims and principles in the lives of my high school pupils, and to try and help them. I have had two rather painful experiences. Florida is missionary ground so far as vocational education is concerned. I have had the work taken out of two schools by my successors. Under the Smith-Hughes Act I was so fortunate as to secure one of the Home Economics Schools. I remained there three years with a good school; I had offered me a better place and better salary and better work, and it was wiped out when I left, and the building used for the grades, and the equipment lay idle. That was the second time that it was wiped out. We need to rally to that work and throw some protection around it. The most serious objection I met with on the part of the parents was that the time required was sapping the intellectual part of the school. It reached down into the grades as low as the fourth and up

through the twelfth. A child of a certain age, it did not make much difference about his intellectual attainment, had to give half time to the work. It is time we were putting our best thought upon this subject.

Mr. Roemer: I am going to introduce a motion at this place in the program. I believe it is advisable for us to either introduce three or four new committees or have some sub-committees in this field. We need a committee for Home Economics; a Committee on Industrial Art and Manual Training, and a Committee on Commercial Work. If it meets with the approval of the Director of our Conference, the High School Inspector, I move that he be authorized to select the members of these three committees, and ask them to go to work on the subject. Let him place in their hands information as he has in the case of these other committees, looking toward developments in these fields.

Mr. Wilson: I fail to see why more committees should be added to these. I think these main committees can do this work without sub-committees. If you select sub-committees for this committee, why not arrange sub-committees for every other committee appointed?

Mr. Cawthon: Why not let individuals be added to this committee? For instance, I have already communicated with one man who I believe will be very valuable, Professor Lockhart. I believe we will be able to accomplish the same thing by simply adding a specialist, one in Home Economics, one in Manual Training, and one in Commercial Work, to this committee, of which Mr. Draper is Chairman.

Mr. Sealey: All who favor the motion please say "Aye," opposed, "No." The motion is unanimously adopted.

Mr. Sealey: In the absence of Mr. Johnson of Orlando, his paper will be read by Mr. Alstetter of Orlando.

PRESENT STATUS AND POSSIBLE IMPROVEMENT IN OUR HIGH SCHOOL LIBRARIES

By Sexton Johnson, Principal High School, Orlando, Florida

In the beginning let it be understood that this is not a treatise on the value and need of a library in each school; neither is it a set of directions for showing how a library can be secured, organized and conducted. Rather it is a simple

statement of what we have done in regard to our library, given with the hope that it may cause others who suffer from the same handicaps to set about organizing their own libraries.

When we took stock last year, we found that the library was largely composed of books which had outlived their usefulness in the homes, and had, therefore, been donated to the school. This process had resulted in a heterogeneous collection, consisting, in a large measure, of such rare old gems as *New York at Gettysburg,* in three large volumes, and the *History of the World's Columbian Exposition.* The government printing office had also apparently been a prolific source of material on hand, some of the choice selections from it being *Diseases of the Horse,* and *Memorial Addresses on the Life and Character of Edwin Burleigh.* You have all had experience with this type of material and know that it does not furnish a working library.

We did, however, have a small but well selected list of books which would form the nucleus of a real school library, provided they could be arranged and classified so that wanted material could be found.

The Board made an appropriation of five hundred dollars, which sum was to cover all books, supplies and furniture for the year's needs.

Our books had heretofore been housed in a classroom about 24 x 28, with six tiers of shelving about two sides of the room. There were no tables or chairs available, and a comparison of market prices on those things showed that our five hundred dollars would buy no furniture if anything was to be left for books. This problem was finally solved by getting ten dollars' worth of pine boards, and having the janitor make four tables, three feet by six feet, thirty inches high. These were stained and varnished to match the woodwork, and, at a total cost of less than three dollars each, gave us very practical library tables. Two dozen cheap chairs completed the furnishing.

Since a trained librarian was out of the question, we placed in charge of this room a girl who had a good college course and has had some teaching experience. She acts not only as librarian, but as school secretary, keeping the records and books, making reports and answering the telephone. She checked over the books on hand and threw out all that seemed of no value, either for use, or for adding to the appearance of

our shelves. The remaining volumes were listed so we would have a record of what was on hand.

All this was done just as school was opening, and we now found it necessary to begin using the library without waiting for cataloging or other work we might wish to do. And so some simple method of charging books taken out was necessary. For this purpose we secured book pockets and charging cards, which were pasted into the books so that when the charging cards were placed in them the ends would protrude from the book and anyone taking a volume from the library without charging it could be seen easily. These charging cards were ruled for writing in the date and name of person taking the book, and the cards are then filed in a tray in alphabetical order, by titles of the books, which title appears at the top of the charging card. This plan would not of course be feasible in a very large library, but has worked well with us.

We had thought that this would be all that was necessary in so small a collection as we had, but the need of a catalog was soon felt, and so we went about cataloging as thoroughly as the money and time at our disposal would allow. Since none of us knew how to do this, we sent for Library Bureau's catalog, *School Libraries.* This proved a mine of valuable information, in particular giving the names of books which would give working directions for doing the work. From its lists we ordered Dewey's *Decimal Classification* and wrote the Library of Congress for suggestions. The latter suggested that we write for *School Library Management,* Martha Wilson, which can be had from H. W. Wilson Co., New York, for 85c. With the aid of these two books any intelligent person should be able to properly organize and classify a small library.

We secured a thousand 3 by 5 cards, the standard library size, and a one-drawer oak filing case with forty division index. The cards were punched at the bottom to permit fastening in the drawer on a rod so they cannot be easily removed.

The writing up of the cards was made a project for the Senior class. One period was given over to explaining to them the work to be done. Then, in their study periods, under the direction of the librarian, they wrote up the title card and the author card for each volume. Each pupil was assigned a shelf, on which the books had previously been roughly grouped

in classes by the librarian, and he was required to write the two cards for each book. In order that the cards might be legible, they were printed rather than written, and each was carefully inspected before being filed.

These cards were now gone over carefully, and the books classified by the use of the Dewey Decimal System, and the shelf numbers put on by the librarian. The shelf numbers are marked on the backs of the books themselves with a white pencil, shellacing over this to prevent rubbing off.

All of this work was done by the pupils and the librarian in about two weeks, seven hundred volumes, besides sets of reference works, being cataloged.

It is our intention to make additional cards, to be filed with the title and author cards already mentioned, so that subjects may be found by the pupil even when he does not know the title or author. This will be a slow process, and can be carried just as far as we desire and time will permit. It can only be done by a teacher or librarian.

The total cost of the supplies used will not exceed twenty-five dollars, and all of the work has been done in spare time and so has cost very little.

Mr. Sealey: It is growing late and I feel that we should close our discussions and transact what little business is necessary at this time. We will now hear from the Committee on Resolutions.

Mr. Cawthon: Mr. Chairman and Gentlemen of the Conference: Your Committee begs to submit the following resolutions:

No. 1. Resolved, That it is the sense of this body that the six-three-three plan of organization would be a solution of the problems at present confronting many of our high school administrators.

No. 2. Resolved, That in the opinion of this body the state textbook law should be so revised as to permit greater elasticity in the selection of high school textbooks.

No. 3. Resolved, That this body is opposed to the postponement of the date of the next adoption of high school textbooks.

No. 4. Resolved, That a fee of one dollar be solicited from each high school principal and teacher in the state to defray

the expenses of publishing the proceedings of this meeting, and that each principal and teacher be furnished with a copy.

Mr. Sealey: Are there any discussions of these resolutions?

Mr. Cawthon: The last resolution is a little embarrassing. I wish there were more members present to participate in this discussion. The resolution pertains to the publishing of our Proceedings. This organization has moved along so far very slowly and very cautiously. We have not yet adopted a Constitution. Personally, I think it is best that we work in this way and make haste slowly. As we accumulate a fund of information and experience, we will be able each year to make our Conference stronger and better. One of the essential factors of this Conference has to do with the publication of the Proceedings. As you men know we do not have a single educational organization in the State that publishes a report of its annual proceedings. For that reason, I am exceedingly anxious that we continue publishing the report of our annual meeting. Last year Dr. Roemer's funds were used to publish the Proceedings. He was glad to do that and was glad to edit the publication, which deserves a great deal of credit, but I think it hardly fair to expect him to continue in this way. Consequently, I have encouraged the committee in offering Resolution No. 4. I do not know whether it is in its proper form, but it is at least a start and will furnish a means of discussion. For the purpose of refreshing our minds let me say that Resolution No. 4 recommends a fee of $1.00 per year for defraying the expenses for publishing the Proceedings of this meeting. This year we have had two stenographers taking the round table discussions and we hope to make the bulletin very much larger and fuller than it was last year. Consequently, I feel that each volume will cost approximately $1.00. It is my idea that we should encourage each principal and teacher to subscribe $1.00 and secure a copy of these Proceedings.

Mr. Norman: If they don't give the dollar, they won't get it?

Mr. Cawthon: It may not be published otherwise. It would cost about five hundred dollars. I really do not know how to proceed, and any suggestions as to what we should do, will be gratefully received.

Mr. Roemer: I will be glad to see that the work is edited, if funds are provided.

Mr. Draper: We have to pay five dollars for membership in the N. E. A. and we get their Proceedings for that, and it seems to me we could add another dollar and get this just as easy. We pay for the N. E. A. volume and are never present. I approve of giving the dollar.

Mr. Frye: We might put it in the form of a motion, that we as principals and teachers of the State agree to pay one dollar either to Professor Cawthon or Dr. Roemer, or to the two of them as a committee. We could turn this matter over to them and let them have it published, and send it out to us after it is published.

Mr. Wilson: That is nothing more than an adoption of Resolution 4.

Mr. Frye: I would wish to add that we leave the responsibility up to Professor Cawthon and Dr. Roemer as Chairmen to see that it is published, and turn the money over to them; either adopt it as a resolution or as a motion.

Mr. Corr: I thought I would not say anything on this, but perhaps there is a way out now to publish the whole proceedings. I think Dr. Roemer said it would cost about $500.00. How many high school principals have you?

Mr. Roemer: About two hundred.

Mr. Corr: Not fifty percent will pay the dollar and not twenty-five percent of the teachers will pay the dollar. It may be that a way can be devised, and I will consult with Professor Cawthon and Dr. Roemer, by which the work may be done for a great deal less than that. I have done a great deal of work here in the State, and none of you know at what expense to me. I have furnished extra copies to the Legislature and to educational campaign, etc., with a promise to pay, but I have not received fifty per cent. I will take the matter up with them and we may be able to arrange some way to get it out cheaper. I am certainly willing to give my dollar.

Mr. Roemer: I would like to get these proceedings into the hands of the teachers. Everyone wishes he could have brought along his whole faculty. If we could interest the teachers, they could get a volume of the proceedings. I wonder if we could put on a campaign in the high schools and let the principals interest as many of their teachers as they

could and in that way it might be done. Let's get these proceedings out to the privates in the ranks, is my idea.

Mr. Draper: Why could we not interest the County Boards in helping to defray these expenses?

Mr. Sealey: They are broke.

Mr. Woodward: I have one other suggestion to make, since we find that every high school principal paying one dollar would not be enough, let every principal take it up with his faculty and ask each school to get five. Taking a school that has twenty teachers, that would cost about twenty-five cents apiece for each one. If we could get one hundred schools at $5.00 a school, that would give us the five hundred dollars.

Mr. Roemer: How many copies would we need to carry this out?

Mr. Frye: How much do they cost?

Mr. Roemer: About $1.00 each.

Mr. Evans: Some of these papers are very long, and I think these discussions are worth ten times more than what my paper contains. I make the suggestions that Dr. Roemer or Professor Cawthon, or whoever edits these papers, use only the essential parts of these papers.

Mr. Roemer: I feel that our people ought to read these papers carefully. I would hate to cut anything out.

Mr. Frye: I do not think we should do that, because we might not cut out the part that should come out. I do not think we should do that, but publish the whole paper, because these papers were good, and what they had in them was certainly worth considering.

Mr. Sealey: Personally, I would like to see these proceedings published in the fullest detail. I see no reason why we cannot get a large number of teachers of the State to gladly pay $1.00 and secure these proceedings. We have, according to this discussion, about two hundred high school principals and six hundred high school teachers. From these two groups we surely should be able to finance this proposition in complete form. If there is no other discussion, we will now vote on the Resolutions. All who favor the adoption of the resolutions as presented by the Committee let it be known by saying, "Aye." All opposed, "No." The Resolutions are adopted unanimously. Are there any announcements to be made before we adjourn?

Mr. Cawthon: Mr. Chairman, I would like to call the attention of the members to the program for this afternoon, tonight, and tomorrow. Preliminaries for the State Track Meet are now in progress out on the Athletic Field. At eight o'clock this evening in the University Gymnasium will occur the annual State High School Declamation Contest. At nine o'clock in the morning will convene the annual meeting of the Florida High School Athletic Association in this hall, and at one P. M. tomorrow begins the Florida High School Track and Field Meet on the Athletic Field.

Mr. Sealey: This has been one of the most pleasant experiences I have ever had. I am sorry the other principals are not here so that they might hear my word of thanks. It is with regret that I see this meeting come to a close. I appreciate the honor paid me. It has been one of the most pleasant tasks of my life. I especially appreciate the consideration and the hearty and sympathetic cooperation on the part of those present. I hope we can get together again a year from now. I believe this can be made a great thing for Florida high schools. We should urge other principals to come over with us; they will be "back numbers" if they do not come and take part in these meetings. We are due thanks to Professor Cawthon and Dr. Roemer for getting out this program and making this meeting a success. I certainly appreciate the honor you have conferred upon me, and have enjoyed the pleasure of presiding over this Body. If there are no other matters to be considered, the Conference stands adjourned until the next annual meeting.

University of Florida

GAINESVILLE, FLORIDA

Catalog 1921-22

Announcements 1922-23

CONTENTS

	Page
UNIVERSITY CALENDAR	3
ADMINISTRATIVE AND EXECUTIVE BOARDS	4
OFFICERS OF THE UNIVERSITY	5
STANDING COMMITTEES OF THE FACULTY	14
GENERAL INFORMATION	15
Recent Gifts	15
History	16
Location	18
Income	19
Equipment	19
Government	28
Honors	34
Expenses	35
Fellowships, Scholarships, and Loan Fund	38
Alumni Association	40
Student Organizations and Publications	40
Admission	42
ORGANIZATION	47
GRADUATE SCHOOL	48
COLLEGE OF ARTS AND SCIENCES	50
COLLEGE OF AGRICULTURE	80
College	80
Experiment Station	102
Agricultural Extension Division	104
COLLEGE OF ENGINEERING	112
COLLEGE OF LAW	128
TEACHERS COLLEGE AND NORMAL SCHOOL	141
College	143
Normal School	155
University Summer School	159
High School Visitation	161
Teachers' Employment Bureau	161
DEPARTMENT OF HYGIENE	163
DIVISION OF MILITARY SCIENCE AND TACTICS	165
DIVISION OF REHABILITATION	169
EXTENSION SERVICE	172
General Extension Division	172
REGISTER	176
Degrees and Certificates	176
Roll of Students	179
Summary	211
INDEX	214

UNIVERSITY CALENDAR

1922-1923

1922—June 14,	*Wednesday*	Summer School begins.
August 9,	*Wednesday*	Summer School ends.
August 10,	*Thursday*	Farmers' Week begins.
September 4,	*Monday*	School for County and Home Demonstration Agents begins.
September 11,	*Monday*	Summer Recess ends. Examinations for Admission. Registration of Students.
September 12,	*Tuesday*	First Semester begins.
October 7,	*Saturday, 2:00 p. m.*	Re-examinations.
	2:30 p. m.	Meeting of General Faculty.
November 30,	*Thursday*	Thanksgiving Holiday.
December 20,	*Wednesday, 12 noon*	Christmas Recess begins.
1923—January 2,	*Tuesday*	Christmas Recess ends.
January 3,	*Wednesday, 8:00 a. m.*	Resumption of Classes.
January 27,	*Saturday*	First Semester ends.
January 29,	*Monday*	Second Semester begins.
February 10,	*Saturday, 2:30 p. m.*	Meeting of General Faculty.
March 3,	*Saturday, 2:00 p. m.*	Re-examinations.
May 26,	*Saturday, 2:30 p. m.*	Meeting of General Faculty.
May 27 to 29		Commencement Exercises.
May 27,	*Sunday, 11:00 a. m.*	Baccalaureate Sermon.
May 28,	*Monday*	Annual Alumni Meeting. Class-Day Exercises. Oratorical Contests.
May 29,	*Tuesday, 10:00 a. m.*	Graduating Day.
May 30,	*Wednesday*	Summer Recess begins.
June 6,	*Wednesday*	Boys' Club Week begins.
June 13,	*Wednesday*	Summer School begins.

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JOHN B. SUTTON.....Attorney-at-Law, Tampa
J. C. COOPER, JR.,.....Attorney-at-Law, Jacksonville
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Professor of Education and School Management and Counsellor for the School of Disabled Soldiers.

CHARLES KENNEDY McQUARRIE,**
State Agent in Charge of Farmers' Cooperative Demonstration Work and Home Economics.

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*Also Summer School, 1921.
†Resigned Jan. 31, 1922.
**Deceased Nov. 15, 1921.
Note.—Officers of the University for regular session are arranged in order of seniority.

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Director of Experiment Station and Agricultural Extension Division.

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*Also Summer School, 1921.

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Physiological Chemist to the Experiment Station.

OWEN FRANCIS BURGER, M.S., SC.D. (Harvard),
Plant Pathologist to the Experiment Station.

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ALEXANDER BRESTH, B.S.,
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EDWARD WALKER JENKINS, B.Ped.,
District Agent for Farmers' Cooperative Demonstration Work in Central Florida.

RAYMOND W. BLACKLOCK, A.B.,
State Agent for Boys' Clubs.

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*Also Summer School, 1921.

HAROLD GRAY CLAYTON, M.S.A.,
District Agent for Farmers' Cooperative Demonstration Work in North and West Florida.

STEPHEN W. HIATT,
District Agent for Farmers' Cooperative Demonstration Work in South Florida.

WILLIAM EUGENE STOKES, B.S., M.S.,
Assistant Grass and Forage Crop Specialist for the Experiment Station.

WILLIAM B. TISDALE, B.S., PH.D. (Wisconsin),
Assistant Plant Pathologist for the Tobacco Experiment Station.

ADOLPH HARVEY BEYER, A.B., B.S., M.S.,
Assistant Entomogilist for the Experiment Station.

CAPTAIN JOHN H. ATKINSON, United States Army, Retired,
Assistant Professor of Military Science and Tactics.

CHAS. E. BELL, B.S.,
Assistant Chemist to the Experiment Station.

CAPTAIN IRA E. RYDER, Infantry, United States Army,
Assistant Professor of Military Science and Tactics.

CAPTAIN FLOYD H. BAIN, Infantry, United States Army,
Assistant Professor of Military Science and Tactics.

EARLL LESLIE LORD, B.S.A.,
Assistant Professor of Botany and Horticulture.

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Assistant Professor of Chemistry.

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Editor of Agricultural News Service and Instructor in Agricultural Journalism.

HAMLIN L. BROWN, B.S., M.S.,
Dairyman for the Agricultural Extension Division.

WILLIAM GREEN WELLS, B.S.A.,
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Instructor in Descriptive Geometry.

R. DEWITT BROWN,
Director of Cadet Band and University Orchestra.

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*Also Summer School, 1921.

FIRST SERGEANT WILLIAM WEAVER, United States Army, Retired,
Instructor, Military Science and Tactics.

BENJAMIN FRANKLIN GAINES, B.S.,
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WILLIAM RICHARD HALE, M.A.,
Instructor in Mathematics.

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JOHN P. LITTLE, B.S.E.E.,
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FREDERICK RENFROE WEEDON, B. S.,
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HOMER HOWARD,
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GLENN BALLARD SIMMONS,
Fellow and Assistant in History.

RAY L. HAMON,
Fellow and Assistant in Mathematics.

DEWITT EVERETT WILLIAMS,
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ROBERT EUGENE DUCKWORTH,
Student Assistant in Modern Languages.

ANTHONY REGERO,
Student Assistant in Band and Orchestra.

CHARLES JAMES REGERO,
Student Assistant in Band and Orchestra.

RUDOLPH CHARLES LOHMEYER,
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JOHN FRANKLIN WILLIAMS, JR.,
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CHARLES WILSON BOYD,
Student Assistant in Physical Education.

HENRY GLENN HAMILTON,
Student Assistant in Agronomy.

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ANSON BORDEN DeWOLF,
Student Laboratory Assistant in Electrical Engineering.

RUSSELL PAUL REDMAN,
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GEORGE ARTHUR CALHOUN,
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IRVIN GREY THOMAS,
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LEE HAMPTON BALL,
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ORVILLE MARION BERG,
Curator for the Department of Chemistry.

RICHARD TEMPLE BURR,
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ARTHUR CRAGO,
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HENRY FULLER,
Student Laboratory Assistant in Chemistry.

CHARLES EDGAR MORGAN,
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Latin.

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Mathematics.

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H. G. METCALFE,*
Mathematics.

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*Summer School, 1921.

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W. E. SAWYER, A.M.,*
Mathematics.

FELICIA WILLIAMS, A.M.,*
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J. H. WOODRUFF,*
Penmanship.

KLEIN H. GRAHAM,
Auditor and Purchasing Agent.

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GEORGE EDWARD WHITE, A.B.,
General Secretary, Y. M. C. A.

THOMPSON VAN HYNING,
Curator of Museum and Librarian to the Experiment Station.

PRISCILLA McCALL KENNEDY,
Librarian to the Law College.

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Secretary to the President.

ELIZABETH ROUNTREE,
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MRS. G. M. SESSIONS,
Secretary to College of Engineering.

MRS. E. J. MARTIN,
Secretary to College of Agriculture.

RUBY NEWHALL,
Secretary to the Experiment Station.

MRS. MARGARET PEELER,
Housekeeper.

MRS. ROXIE CONNELL,
Graduate Nurse in Charge of the Infirmary.

MRS. S. J. SWANSON,
Matron.

RACHEL THOMSON McQUARRIE,
Assistant to the Auditor.

EURY M. KNIGHT,
Bookkeeper and Cashier.

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*Summer School, 1921.

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Director.

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Specialist in Extension Teaching.

O. I. WOODLEY, PH.D. (Columbia),
Education.

CLIFTON F. HODGE, PH.D. (Johns Hopkins),
Civic Biology.

CHARLES F. DAVIS, M.A.,
American Government.

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Review Courses.

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Journalism.

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Industrial Art.

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Mathematics.

CEDORA FUTCH, A.M.,
Mathematics.

PANSY E. MANCHESTER, A.M.,
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J. REX FARRIOR, A.B.,
Latin.

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French and Spanish.

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Civil Service.

ELDRIDGE HART, L.L.M.,*
Business Administration.

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Commercial Courses.

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MEIGS B. RUSSELL.
MRS. FLORENCE T. COTNAM.
HOWARD STRONG.
MRS. EMILY NEWELL BLAIR.
LUCIUS E. WILSON.

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*Summer Session.

STANDING COMMITTEES OF THE FACULTY

The President of the University is *ex-officio* a member of all Standing Committees

ADMISSION

Professors Simpson, Farr, Crandall, Leake, Fulk, Moore, Willoughby, Roemer, Rogers.

ALUMNI

Professors Willoughby, Floyd, Anderson, Trusler, Perry, Buchholz.

ATHLETICS

Professors Beck, Kline, Leake, Atkinson, Van Fleet, White, Manchester.

DISCIPLINE

Professors Crandall, Fulk, Leigh, Van Fleet, Cody, Holmes.

GRADUATE WORK

Professors Anderson, Farr, Newell, Benton, Trusler, Norman.

LIBRARY

Professors Leake, Farr, Fulk, Miltimore, Shealy, Bristol.

MILITARY AFFAIRS

Professors Reed, Shealy, Roemer, Black.

PUBLIC DEBATING

Professors Bristol, Leake, Farr, Trusler, Roemer.

PUBLIC FUNCTIONS

Professors Rogers, Strong, Rogers, Culin, Reed.

PUBLICITY

Professors Riley, Leigh, Hathaway, Willoughby, Beck.

SCHEDULE

Professors Perry, Strong, Simpson, Black, Rogers, Roemer.

SELF-HELP

Professors Turlington, Floyd, Buchholz, Cockrell, Day, White.

STUDENT ORGANIZATIONS

Professors Cockrell, White, Turlington, Walker, Simpson.

STUDENT PUBLICATIONS

Professors Trusler, Benton, Crow, Farr.

UNIVERSITY PUBLICATIONS

Professors Moore, Crow, Black, Roemer, Sweet.

GENERAL INFORMATION

RECENT GIFTS

Many of the state educational institutions of the South —among them those of Florida—have in recent years received substantial gifts. The University feels confident that its friends will continue to help in its upbuilding. All gifts, of whatever nature or value, will be gratefully acknowledged.

See also under Museum, Loan Funds, and College of Agriculture.

CHAIR OF SECONDARY EDUCATION.—This opportunity is taken of acknowledging the annual gift by the General Education Board of New York of a sum sufficient to maintain a Professorship of Secondary Education. Since June, 1920, owing to increased appropriations by this Board, it has been possible to extend greatly the work undertaken.

DEPARTMENT OF HYGIENE.—The University gratefully makes mention of the benefits derived from an appropriation by the U. S. Government of ten thousand dollars ($10,000) —contingent upon a like appropriation by the State—and used in fostering the physical welfare of the students and in teaching hygiene.

SCHOLARSHIPS.—No method of contributing to the spread of higher education is more beneficent than to make it possible for a worthy but poor young man to attend his state university. The establishment of several scholarships is gratefully acknowledged—see pages 15, 38 and 39.

Arthur Ellis Ham Memorial Scholarship.—The University here renders reverent and grateful homage to the memory of a former student, Captain Arthur Ellis Ham, who fell in battle at St. Mihiel on Sept. 14, 1918.

His will provided that one half of his military insurance should go to Smith College, of which his widow, Mrs. Elizabeth C. Ham, is a graduate, and the other half to the University, to be used in establishing at each of these institutions "a

scholarship for the annual benefit of some needy and deserving student." Mrs. Ham at once generously sent checks for the full amount, five thousand dollars ($5,000) each, to Smith and to Florida. The Board of Control gratefully accepted the bequest, and the Faculty, in its resolutions of sympathy and thanks, added that the scholarship should be known as the "Arthur Ellis Ham Memorial Scholarship."

HISTORY

Florida has always manifested interest in higher education, and with this in mind has formulated many plans and established many institutions. As early as 1824 the foundation of a university was discussed by the Legislative Council. In 1836 trustees for a proposed university were named, but apparently accomplished nothing. *(Memoirs of Florida,* 1,168.)

Upon its admission to the Union in 1845, the State was granted by the General Government nearly a hundred thousand acres of land, the proceeds from which were to be used to establish two seminaries, one east and one west of the Suwanee River. This led to the foundation, at Ocala, in 1852, of the East Florida Seminary and of the West Florida Seminary, at Tallahassee, in 1856. The former of these institutions was, however, removed in 1866 to Gainesville.

The State Constitution of 1868 contained provisions for establishing and maintaining a university *(Art.* VIII, *Sec.* 2), pursuant to which the Legislature passed the next year "An Act to Establish a Uniform System of Common Schools and a University". Other attempts to establish a university were made in 1883 by the State Board of Education and in 1885 by the Legislature. Furthermore, the State Constitution of 1885 expressly permitted special legislation with regard to a university.

Meanwhile, in 1870, the Legislature had passed "An Act to Establish the Florida Agricultural College". This not fully meeting the terms of the "Land-Grant College" Act of Congress of 1862, the Legislature passed in 1872 a supplementary Act and the State received from the General Government ninety thousand acres of land in support of the proposed

college. A site for this was selected in 1873, in 1875, and again in 1883—the third to be chosen being Lake City. Here in the autumn of 1884 the work of instruction was begun. An attempt was made in 1886 by this institution to have its name changed to the "University of Florida", a title it finally secured by the Legislative Act of 1903. Before this, in 1887, the Florida Agricultural Experiment Station had, in accordance with the terms of the Hatch Act, been established as one of its departments.

During these years, in addition to the three mentioned, there had come into existence three other State institutions of higher education: The Normal School, at DeFuniak Springs, the South Florida College, at Bartow, and the Agricultural Institute, in Osceola County. In 1905, however, inasmuch as these six institutions had failed to make satisfactory differentiation among themselves and to separate their work sufficiently from that of the high schools of the State, and inasmuch as the cost of maintaining all seemed disproportionate to the results obtained, the Legislature passed the "Buckman Act", the effect of which was to merge the six into the "Florida Female College" and the "University of the State of Florida". In 1909 an Act of the Legislature changed the name of the one to the "Florida State College for Women", of the other to the "University of Florida".

During the first session of the University a distinct Normal School, which included two years of Sub-Freshman grade, was maintained. In addition to this, instruction was given in agriculture and engineering, as well as in the usual collegiate branches. Candidates for admission to the Freshman class must have finished the eleventh grade of a high school. The Agricultural Experiment Station was a separate division, altho members of its Staff gave instruction to the students and the President of the University acted as its Director. The next year the Staff were required to devote their time exclusively to Station activities, and a special Director was elected. The Normal School was abolished and instruction in pedagogy was transferred to the University proper. Two years of Sub-Freshman work were, however, still offered.

Upon the election in 1909 of Dr. A. A. Murphree to the presidency, steps were taken to reorganize the University. The present organization dates from 1910. The College of

Law was added in 1909 and the departments offering instruction mainly to normal students were organized into a college in 1912. In 1913 the present entrance requirements went into effect. The same year a Summer School was established at the University by Act of the Legislature and the Farmers' Institute Work of the University and the Cooperative Demonstration Work for Florida of the U. S. Department of Agriculture were combined. On July 1, 1915, all the agricultural activities of the University were placed under the direction of the Dean of the College of Agriculture.

Immediately after the United States entered the World War the equipment of the University was placed at the disposal of the Government. During the summer of 1918 the College of Engineering was operated as the "University of Florida Army School", for the vocational training of soldiers. At the opening of the session of 1918-1919 all the regular activities of the University were subordinated to the task of training men for the armed forces of the United States. On Dec. 14, 1918, upon the mustering out of the Student Army Training Corps, the University again took up its regular work, altho it made liberal allowance in credits to students for the interruption of their studies caused by military service.

During the summer of 1919 the General Extension Division was established. The University also entered into contract with the United States Government to assist in the work of rehabilitating men disabled while in the armed forces of the country.

LOCATION

On the 6th day of July, 1905, acting under powers conferred by the Buckman Act, the State Board of Education and the Board of Control, in joint session, selected Gainesville as the location of the University. During the scholastic year of 1905-06, it was found necessary to carry on the work of the University at Lake City. Since the summer of 1906 the institution has occupied its present site.

The advantages that Gainesville presents as the seat of the University are numerous. It is centrally located and easy of access. It has well-paved, -lighted, and -shaded streets, an exceptionally pure water supply, and a good sewerage system. The citizens are energetic, progressive, and hospitable. The

moral atmosphere is wholesome. The leading religious denominations have attractive places of worship.

INCOME

The annual income of the University, apart from Legislative appropriations, is derived principally from the following Federal grants: (a) The "East Florida Seminary Fund"—about two thousand dollars ($2,000); (b) the "Agricultural College Fund" bonds—about seventy-seven hundred dollars ($7,700); (c) one-half of the "Morrill Fund"—twelve thousand five hundred dollars ($12,500); (d) one-half of the "Nelson Fund"—twelve thousand five hundred dollars ($12,500). The total income thus derived amounts to thirty-four thousand seven hundred dollars ($34,700).

For the support of the Agricultural Experiment Station the Federal government makes two annual grants: (a) the "Hatch Fund" and (b) the "Adams Fund", each amounting to fifteen thousand dollars ($15,000).

See also Recent Gifts, Fellowships, Scholarships, Loan Funds, and Agricultural Extension Division.

EQUIPMENT

GROUNDS AND BUILDINGS

The University occupies a tract of six hundred and thirteen acres, situated in the western extremity of Gainesville. Ninety acres of this tract are devoted to campus, drillgrounds, and athletic fields; the remainder is used by the College of Agriculture.

The University is one of the few institutions in the United States that made plans before laying the foundation of a single building for all future development of the campus, as far as this could be foreseen. Consequently the campus presents an harmonious appearance. The liberality of the State has permitted the erection of substantial and attractive modern buildings as fast as they were needed. Early in 1922 the contract was let for the construction of the first unit of the Administration Building, which is to be the outstanding architectural feature on the campus. The entire building will cost $750,000. This unit, which is to cost $200,000, will include an auditorium accommodating 2,200 people.

The present buildings are:

The two *Dormitories,* Thomas Hall and Buckman Hall, brick and concrete structures, three stories in height, sixty feet in width and three hundred and two hundred and forty feet, respectively, in length. They are built in fireproof sections, each containing twelve suites of dormitory-rooms and on each floor of each section a shower-bath, lavatory, and toilet.

The *Mechanic Arts Shop,* a one-story brick building, sixty feet long and thirty feet wide, with a wing thirty feet long and twenty feet wide. It is used, at present, as woodshop, blacksmith-shop, and foundry.

Science Hall, a brick and concrete building of two stories and a finished basement, one hundred and thirty-five feet long and sixty-six feet wide. It contains the classrooms and laboratories of the Departments of Chemistry and of Biology and Geology, as well as the University Museum.

The *Agricultural Experiment Station Building,* a brick and concrete structure of three stories and a finished basement, one hundred and twenty-five feet long and sixty feet wide. It contains the offices and laboratories of the Station.

Engineering Hall, a brick and terra-cotta structure, three stories high, one hundred and twenty-two feet long and seventy-three feet wide, with two one-story wings. One wing is used for boilers and machine-shop, the other (one hundred and eighty feet long by forty feet wide) is designed for woodshop, blacksmith-shop, and foundry. Engineering Hall provides offices, classrooms, laboratories, and drafting-rooms for the Departments of Civil, of Electrical, and of Mechanical Engineering, of Mechanic Arts, and of Physics.

The *Agricultural College Building,* a brick and concrete structure, three stories high, one hundred and fifteen feet long and sixty-five feet wide. It provides for classrooms, laboratories, and offices for the College, and for Extension Work.

The *University Commons,* a brick building of one story and basement, one hundred and fourteen feet long and forty-two feet wide, with a wing forty-nine feet long and twenty-seven feet wide. It provides a large dining-hall and kitchen. A wooden annex, one hundred and twenty feet long by sixty feet wide, is now used as a Y. M. C. A. "Hut".

Language Hall, a brick and stone structure of three stories, one hundred and thirty-five feet long and sixty-six feet wide. It is the home of the College of Arts and Sciences and provides classrooms and offices for the Departments of Languages, History and Economics, Mathematics, and Sociology and Political Science, together with the administrative offices of the University. In the basement are the bookstore and the offices and presses of the *Alligator.*

George Peabody Hall, erected at a cost of forty thousand dollars ($40,000), the gift of the Peabody Board of Trust. It is a brick building, three stories high, one hundred and thirty-five feet long and seventy-two feet wide. It provides for the Departments of Education and Philosophy and for Teacher-Training Work. The general library of the University is at present in this building.

The *College of Law Building,* a brick and stone structure of two stories, one hundred and twenty feet long and seventy feet wide. It contains an auditorium, model courtroom, lecture-rooms and offices, library, reading and consultation rooms, cataloguing room, and quarters for the Marshall Debating Society.

Auditorium and Gymnasium, a brick and stone structure of two stories (one of which is mezzanine) and basement, one hundred and six feet long and fifty-three feet wide. It is heated by steam, is fully supplied with hot water, and is well lighted and ventilated. The main floor is used as an auditorium and gymnasium. A gallery extending around the whole room provides space for the spectators at gymnastic exhibitions. The basement contains rooms for the director and for University and visiting teams, and for lockers, shower-baths and toilets. Adjacent is a swimming pool, thirty-six feet long, twenty-four feet wide, and from four and a half to seven feet deep.

WOODEN BUILDINGS.—During the existence of the S. A. T. C., the Vocational Unit erected:

Two *Barracks,* each of two stories, sixty feet long and forty feet wide, and each accommodating sixty-six men. One of these buildings has been equipt as a hospital with accommodations for twenty-five men.

A *Garage,* one hundred and twenty feet long, and well arranged for repair work.

VALUE.—The value of the property used for the work of the University is about $1,000,000.

GENERAL LIBRARY

The general Library contains about 35,000 volumes. Additional books are purchased as fast as funds are available. A special effort is being made to place on the shelves all books extant relating to Florida.

The books are classified and shelved according to the Dewey Decimal system, and are indexed in a dictionary catalog. Students are encouraged to use the catalog, and the indexes to periodical literature, and by free access to the shelves to become familiar with the books themselves. A taste for literature and information is being developed in many students who before entering the University have not had access to a good library.

As a designated depository of the United States government the Library receives annually several hundred bound volumes and many pamphlets. In addition much valuable material is received from the various state universities, colleges and experiment stations.

The Library receives about two hundred and seventy-five general and technical periodicals, the current numbers of which are to be found on the reading tables. These periodicals are bound as rapidly as the volumes are completed and are particularly valuable for use in reference work. The daily and weekly papers are to be found in the newspaper room. Thru the courtesy of the editors a large number of county and city newspapers of Florida are sent to the Library for the use of the students.

The University Library is glad to be of assistance to the teachers and high-school students of the State. Under reasonable regulations books are lent upon request. When it is impossible to send the material desired bibliographies with suggested sources of information are gladly furnished.

The Library has been fortunate in the number of gifts received during the past year. Dr. A. A. Murphree gave two hundred and fifty volumes. Five hundred volumes were received from the American Library Association. The family of the late Rev. Rees W. Edwards, of Jacksonville, gave about two hundred and fifty volumes on religion and philosophy.

These books will be kept together and the collection will be known as the "Rev. Rees W. Edwards Memorial." The University of Florida is one of seventy colleges and universities in the United States to be presented with a copy of the celebrated Codice Trivulziano, which is the original manuscript of Dante—Divine Comedy. Only three hundred and fifty copies have been published and the volume is very valuable. This was given to the University by the Italians of the United States of America, on the initiative of Luigi Carnovale, Chicago, Illinois, in commemoration of the six-hundredth anniversary of the death of Dante, September 14, 1921.

DEPARTMENTAL LIBRARIES

The technical departments possess special libraries, housed in their respective buildings, but accessible to all members of the University.

MUSEUM

By Act of Legislature of 1916-17 the University was made the home of the Florida State Museum. The Act further provides for a natural history and ethnological survey of the State; for scientific investigations looking towards the further development of its natural resources; for the collecting of material of scientific, economic and civic value, whether pertaining to the mineral, vegetable, and animal kingdoms or to the aboriginal tribes and the early explorations and settlements; for a library; and for traveling exhibits to be kept in circulation among the schools of the State. Adequate funds for carrying out all the provisions of this Act have not as yet been provided; but, largely thru the generosity of some of our citizens, enough specimens and data are already in hand to permit the director to announce the opening of the State Museum.

The Museum contains at the present time more than two hundred and seventy thousand specimens, about one half of which have been carefully catalogued. Among the eight hundred and seventy-six recent accessions are perhaps most worthy of mention an herbarium of four thousand and eight hundred sheets presented by Dr. Samuel C. Hood, of Orlando; the R. D. Hoyt collection of more than eight hundred birds and four hundred sets of bird eggs; the John J. Ryman collection

of more than two hundred birds and eight hundred sets of bird eggs; a complete collection of the mollusca of Alabama, presented by the late Dr. Herbert H. Smith, curator of the Alabama Geological Survey Museum; a large number of bird plumes, presented thru Secretary Gilbert J. Pearson, of New York, by the National Association of Audubon Societies; and the "Loring Memorial Collection", presented by General Loring's heirs, Mrs. William Loring Spencer and Mrs. M. C. Royston, of St. Petersburg. This last collection is of great historical and artistic value, besides being intrinsically worth many thousands of dollars.

Other valuable donations can, it is believed, be announced soon. Even now it is known that much material of historic and artistic interest has been left to the Museum by will and negotiations are under way for securing large exhibits. One good-sized library and a collection weighing more than three tons are already packed for shipment to the University.

In addition to these there are in the Museum a fair collection of the mollusca of Florida, containing more than eighteen thousand specimens; about nine thousand Florida fossils; more than five hundred Florida reptiles; more than ten thousand specimens of stone implements and pottery of the aborigines of Florida; besides thousands of specimens of historic articles, minerals, insects, etc. The library of the Museum numbers about five thousand volumes and pamphlets.

Unfortunately, owing to the lack of rooms and cases, only a small part of this material is now on exhibition and of this part few specimens are arranged to the best advantage. A few rooms are, however, open every day but Sunday, from one to five P. M., and in these rooms are many objects of interest. Director Van Hyning is always pleased to be of service to visitors.

LABORATORIES

For the *Laboratories* and other equipment of the College of Agriculture, see pages 81-84.

The *Botanical Laboratory* contains enough dissecting microscopes and instruments and Bausch and Lomb compound microscopes, magnifying from 80 to 465 diameters, for the individual use of the students; a Zeiss binocular and a large compound microscope of very high power; two demonstration microscopes; and a McIntosh stereopticon, with projection

microscope attachment. For work in histology there are hand microtomes, a sliding microtome, section knives, Miller's paraffin bath, and a supply of reagents, stains, and mounts; for studies in physiology there are germination boxes, nutrient jars, an osmometer, a clinostat, etc. An herbarium has been started, to which students each year add specimens, which they collect, identify, and mount. A case of reference books and periodicals is in the laboratory within easy reach.

The *Chemical Laboratory* is equipt with the apparatus and material necessary for instruction in general inorganic and organic, analytical, and industrial chemistry, as well as for more advanced work. It contains two delicate balances, a latest model polariscope, microscope,. spectroscope, ample platinum ware (crucibles, dishes, electrodes, wire, and foil), and several pieces of apparatus for illustrating chemical principles.

The *Dynamo Laboratory* occupies a portion of Engineering Hall. For description of its equipment, see page 26.

The *Geological Laboratory* contains the U. S. Geological Survey Educational Series of rocks. For the study of historical geology there is a collection of fossils illustrating the distribution and development of organisms; for the study of mineralogy there is a blowpipe collection of one hundred selected mineral species, an accessory blowpipe collection of miscellaneous minerals, a collection of fifty natural crystals, and a reference collection of choice mineral specimens.

The *Hydraulic Laboratory,* belonging to the College of Engineering, is described on page 27.

The *Physical Laboratory* is well equipt with apparatus and meets the needs of such undergraduate work in physics as is usually carried on in the best American colleges.

The entire third story of Engineering Hall is devoted to the department of physics, as well as a lecture-room on the second story, seating 147, and provided with projection lantern. The quarters on the third story include a main laboratory, 53 by 27 feet; an electrical laboratory, 42 by 26 feet; an optical room, 22 by 15 feet, arranged so as to be effectively darkened; an office and private laboratory, 25 by 19 feet; a workshop and apparatus room, 42 by 19 feet; a classroom, 24 by 22 feet; and a number of storerooms. Water, gas, and several electrical circuits are led to all the rooms.

The *Psychological Laboratory* occupies six rooms on the first floor of Peabody Hall and is well equipt for class demonstrations, and for carrying on experimental and research work. As the demand arises new equipment will be added. In addition to the apparatus for the regular experimental work, the laboratory is equipt for carrying on mental and physical tests in connection with the work in educational psychology offered by the Teachers College.

The *Zoological* and *Bacteriological Laboratories* are well equipt for the work of instruction. In addition to the necessary glassware and reagents, there are a number of high-grade microscopes; dissecting microscopes; one Leitz large compound microscope with mechanical stage and a full set of apochromatic objectives; two microtomes, one for celloidin, the other for paraffin sectioning; paraffin bath; sterilizers, both wet and dry; warm and cool incubators; dark-ground illuminator; balances; centrifuge; breeding cages; anatomical preparations and models; a number of the Leukart-Chun zoological wall charts; and one Bausch and Lomb projecting lantern with accessories. The departmental library contains a number of current periodicals, as well as the more important textbooks and reference works.

ENGINEERING

The *Dynamo Laboratory* contains a 10-KW Type ACS General Electric synchronous converter, a 25-KW General Electric Type IB direct current generator, a 1-HP Westinghouse Type R motor, a 1-KW synchronous motor, and two 2-KW Westinghouse Type S dynamos, designed to be used either as generators or as motors. The switchboard panel for each machine is placed near it, but is connected to terminals on a main distribution board for the whole laboratory. Power is supplied by a 10-HP single-phase Wagner induction motor, connected with the city alternating current supply and driving the main shaft of the laboratory. The various machines are driven from this shaft, and can be thrown in or out by friction clutches.

The laboratory is also supplied with transformers, several types of arc lamps, and numerous measuring instruments of different ranges. The laboratory has enjoyed the generosity of a number of manufacturers, who have lent machinery to it.

It has also benefited by a large loan of machinery temporarily out of use, from the American Agricultural Chemical Company, Pierce, Florida.

For experiments in *power engineering* there are indicators, gauges, flue-gas analyzers, a draft-gauge, pyrometer, anemometer and a psychrometer. The water-tube boilers installed for the heating plant are available for testing purposes. There are also two blowers and a boiler-feed pump.

The *Testing Laboratory* has a 50,000-pound Riehle machine for testing the tensile, compressive, and transverse strength of materials, and a cement-testing machine with the necessary accessories. These machines are useful for testing materials used in road construction.

Hydraulic Laboratory.—One Pelton Waterwheel; one box weir fitted with a triangular notch, and with hook gauge attacht; one Venturi meter; one Ford water meter testing apparatus; one hydraulic ram; one gauge testing apparatus; 2 water piezometers; 2 mercury gauges; one Pito tube; one water tank equipt with standard orifices; and various smaller instruments for conducting hydraulic experiments.

The *Computing Room* is furnished with all necessary tables and a library of about two hundred reference books for use in connection with the work of the mechanical laboratories and drafting-room.

The *Drafting-Room* is equipt with substantial oak desks and possesses the necessary minor equipment to accommodate classes of twenty-four students.

Surveying Instruments.—These consist of three surveyor's compasses; three wye and two dummy levels, and one precision level; two plain and five stadia transits, of which three are equipt with attachments for solar and star observations; one complete plane-table; one large telescope for astronomical work; one sextant; one ameroid barometer; one army sketching case; and the necessary rods, chains, tapes and minor instruments. Blue-printing apparatus also is included.

Shops.—The Wood-Shop is provided with lockers, equipt with full sets of tools for bench work: Chisels, saws, squares, gauges, etc. The wood-working machinery consists of a planer, a rip-saw, a band-saw, an iron combination saw table, a jointer, and a grindstone.

The Machine-Shop is equipt with an 18-inch Cady, a 16-inch Reed, a 16-inch Bradford, an 11-inch Star, and a Rivett lathe; a drill press; a Gray planer; a No. 1 Brown and Sharp miller; a Springfield shaper; a No. 2 Marvel hack saw; universal tool grinder; emery wheels; vises and tools.

The Forge-Shop is equipt with six power-blast forges, one hand forge, six anvils, and tools.

ATHLETIC

The University has provided a hard-surfaced athletic field, including football gridiron, baseball diamond, with grandstand and enclosed field, and tennis-court facilities. A basketball court and concrete swimming-pool also are located on the campus. Membership is maintained in the Southern Intercollegiate Athletic Association, the Southern Intercollegiate Conference and the Amateur Athletic Union.

MILITARY

Military equipment of a value of more than $50,000 is available for military instruction.

GOVERNMENT

ADMINISTRATION

BOARD OF CONTROL.—The general government of the University is vested by law in a Board of Control consisting of five members from various parts of the State, appointed, each for a term of four years, by the Governor of Florida.

The Board of Control appoints the President and, upon his nomination, elects members of the Faculties, directs the general policies of the University, and supervises the expenditure of its funds. The Board also prescribes the requirements for admission, with the advice of the President and Faculties, and upon their recommendation confers degrees.

PRESIDENT.—The direct administration of all affairs of the University is in the hands of the President.

DEANS.—As executive head each college of the University has a Dean, appointed from the Faculty of that college. These officers are responsible to the President.

UNIVERSITY COUNCIL.—The President and the Vice-President of the University and the Deans of the several colleges

form a council of administration, with the following functions: To lay out new lines of work, inaugurate new enterprises in general, and to prepare the annual budget; and to act as the judicial body of the General Faculty on cases of general discipline not under the authority of the colleges, on new courses of study and changes in existing courses, bringing these matters before the Board of Control, and on questions of college action referred to it by any member of the General Faculty.

FACULTIES.—The General Faculty includes all persons, except laboratory and undergraduate assistants, engaged in the work of instruction in the University. Under the leadership of the President, it forms the governing body in all general matters of instruction and discipline.

The Faculty of a college consists of those members of the General Faculty who give instruction in it. Under the leadership of its Dean, it forms the governing body in matters of instruction and discipline in its college.

REGULATIONS

SUPERVISION.—An *Officer in Charge,* occupying quarters in one of the dormitories, has immediate supervision of the general life of the student-body.

OFFENSES AGAINST GOOD CONDUCT.—Any offense against good conduct, in the ordinary meaning of the word, renders a student liable to discipline, whether or not a formal rule against the offense has been published.

The following offenses will be treated with special severity: Disrespect to an officer of the University; wanton destruction of property; gambling; having revolvers in possession on the University grounds.

HAZING.—No student will be assigned to a room in a dormitory until he has been matriculated and has signed the following pledge:

"I hereby promise upon my word of honor, without any mental reservation whatsoever, to refrain from all forms of hazing while I am connected with the University of Florida."

ATTENDANCE UPON UNIVERSITY DUTIES.—A student who accumulates three unexcused absences from drill, or ten from lecture or recitation, will be given a severe reprimand and parent or guardian will be notified. Two additional unexcused absences will cause his dismissal from the University

for the remainder of the academic year. Ten unexcused absences from Chapel will involve, except in the case of a Senior or of a student in the College of Law, the same penalty.

A student who, because of ill health or of outside demands upon his time, finds it impossible to be regular in his attendance upon University duties, is requested to withdraw; but this does not in any way reflect upon his good standing.

Delinquencies in University duties are reported to the Registrar, who brings them to the attention of the students concerned and requires a prompt explanation to be made. A careful record of all delinquencies is kept.

INTELLIGENCE TEST.—All Freshmen are required to take an intelligence test early in the first semester.

STUDIES

ASSIGNMENT TO CLASSES.—Every student must appear before the Dean of his college at the beginning of each academic year for assignment to classes. No instructor has, except as authorized by the Dean of his college, authority to enroll a student in any course.

CHOICE OF STUDIES.—The choice, subject to considerations of proper preparation, as to which one of the various curricula is to be pursued rests with the individual student; but the group of studies selected must be that belonging to one of the regular years in the chosen curriculum exactly as announced in the catalog for the year in which the student entered—unless special reasons exist for deviating from this arrangement.

No applicant for a Bachelor's degree shall be allowed to make a change in the curriculum selected, unless such change be submitted to the faculty of his college at its first meeting in the semester in which the change is desired and be approved by a two-thirds vote of those present.

CONDITIONS.—A student prepared to take up most of the studies of a certain year in a regular curriculum, but deficient in some, will be permitted to proceed with the work of that year subject to the *condition* that he make up the deficiency. Provision for all of the lower studies must be made before any of the higher may be taken. In the event of conflicts in the schedule or of excessive quantity of work, higher studies must give way to lower.

QUANTITY OF WORK.—Minimum and maximum numbers of recitation hours (or equivalent time in laboratory courses) per week are prescribed in each college, according to the following table:

College	*Freshman-Sophomore*		*Junior-Senior*	
	Minimum	Maximum	Minimum	Maximum
Arts and Sciences	17	21	15	19
Agriculture	18	25	16	23
Engineering	18	23	16	21
Law	15	18	15	18
Teachers	17	21	15	19

In all of the above colleges except Law the basic training course of the Reserve Officers' Training Corps, amounting to three credit hours in the Freshman and Sophomore years, is included.

Two hours of laboratory work are considered equivalent to one hour of recitation.

CHANGES IN STUDIES.—A student once registered is not permitted to discontinue a class or to begin an additional one without written permission from the Dean of his college, which must be shown to the instructor involved; and if he is undergoing military training he will not be permitted to discontinue that work on account of transferring, within a particular year, to a college in which military instruction is not compulsory. A student who has been registered for two weeks will not be permitted to make any change in studies, except during the first two days of the second semester, without the payment of a fee of two dollars ($2.00).

GRADES AND REPORTS.—Each instructor keeps a record of the quality of work done in his classes and monthly assigns each student a grade, on the scale of 100. This grade is reported to the Registrar for permanent record and for entry upon a monthly report to the student's parent or guardian.

If the monthly grades of a student are unsatisfactory, he may be required to drop some of his studies and substitute those of a lower class, or he may be required to withdraw from the University.

EXAMINATIONS.—Examinations on the ground covered are held at the end of each semester.

FAILURE IN STUDIES.—A final grade, based upon the examination and the monthly grades, is assigned for each semester's work. If this grade falls below 75, the student is

considered to have failed and may proceed only subject to a condition in the study in which failure has occurred.

A student failing in more than fifty per cent of his class hours for two consecutive months, will be dropped for the remainder of the College year. Students so dropped will be entitled to honorable dismissal, unless their failure is clearly due to negligence. Upon petition, such a student may, at the discretion of the President of the University and the Dean of his College, be reinstated upon such terms as to them may seem best.

RE-EXAMINATIONS.—A student who has made a semester grade of 60 or more, but less than 75, in any subject shall be entitled to a re-examination in that subject on the first Saturday of March or of October; altho a senior failing on an examination at the end of the second semester shall be allowed a re-examination during the week preceding commencement. Only one re-examination in any subject is permitted; in case of failure to pass this, with a grade of 85, the student must repeat the semester's work in that subject.

DEGREES.—The special requirements for the various degrees offered by the University will be found under the General Statement of the Graduate School and of each of the five colleges. The following regulations apply to all colleges:

While pursuing studies leading to a degree a student must be registered in the college offering that degree.

Two degrees of the same rank, as, e.g., B.S.C.E. and B.S.E.E., will not be conferred upon the same individual, unless the second degree represents at least fifteen "year" hours of additional work.

SPECIAL STUDENTS.—Students desiring to take special courses will be allowed to take those classes for which they may be prepared. The number of such students in a college is, however, restricted to not more than twenty-five per cent of its enrolment. These students are subject to all the laws and regulations of the University. Special courses do not lead to a degree.

The University permits special courses to be taken solely in order to provide for the occasional exceptional requirements of individual students. Abuse of this privilege, for the sake of avoiding studies that may be distasteful, cannot be tolerated.

Accordingly, no minor is permitted to enter as a special student except upon written request of his parent or guardian. Minor special students must, except as provided for in the College of Agriculture, offer fifteen entrance units.

ADULT SPECIALS.—Persons twenty-one or more years of age who cannot satisfy the entrance requirements, but who give evidence of ability to profit by the courses they may take, may, under exceptional circumstances, be admitted as "Adult Specials". Such students appear before the Committee on Admission for enrolment and are not excused from military duty; altho, if more than twenty-two years of age, they may, under certain conditions, secure exemption. (See page 166.)

CLASSIFICATION OF IRREGULAR STUDENTS.—Until all entrance credits have been satisfied a student shall not rank higher than a freshman; a student deficient in any freshman work shall not rank higher than a sophomore; and one deficient in sophomore work not higher than a junior. But a special student is not considered as belonging to any of the regular classes.

When special students make up their deficiencies they may become regular students and candidates for a degree.

ATHLETIC TEAMS, MUSICAL AND OTHER CLUBS

ABSENCES ON ACCOUNT OF ATHLETICS, ETC.—The members of regular athletic teams, of musical and of other student organizations, together with necessary substitutes and managers, are permitted to be absent from their University duties for such time, not to exceed nine days per semester, as may be necessary to take part in games, concerts, etc., away from Gainesville. All classwork missed on account of such trips must be made up, as promptly as possible, at such hours as may be arranged by the professors concerned. All drills missed, which so reduce the semester total that it averages less than three hours per week, must be made up before semester credits can be given.

SCHEDULES.—Schedules of games, concerts, etc., must be arranged so as to interfere as little as possible with University duties. Schedules of games must receive the approval of the Committee on Athletics; schedules of concerts, of dramatic entertainments, etc., the approval of the Committee on Student Organizations.

All regular games will be played under the rules of the Southern Intercollegiate Athletic Association.

ELIGIBILITY TO ATHLETIC TEAMS, MUSICAL CLUBS, ETC.—Any team or club representing the University must be composed exclusively of students in good standing. Negligence of duties, or failure in studies, excludes a student from membership in all such organizations.

No minor student is permitted to play on any regular athletic team, if his parent or guardian objects. A list of players and substitutes must be submitted to the Committee on Athletics before each game and must receive its approval.

FINANCES.—The general Faculty has made the following rules:

All student organizations desiring to collect funds for any purpose whatsoever on the campus must, unless such organizations be under other Faculty control, first secure written permission from the Committee on Student Organizations.

No profits are to be taken by the officers of any student organization that makes its appeal for funds on the basis of its being a University enterprise.

At least once a year student organizations engaging in financial operations must have their accounts audited by the Committee on Student Organizations and must publish in the *Alligator* a statement of their receipts and expenditures.

HONORS

GAMMA SIGMA EPSILON.—The Beta Alpha Chapter of the Gamma Sigma Epsilon Chemical fraternity, a national honor society, was established at the University of Florida in the fall of 1921. To be eligible for membership, a student must have passed two courses in chemistry with an average grade of not less than 85%. In addition to his class standing, he must have proved himself a real man, dependable and ambitious; and must have the respect and the friendship of his fellow students.

PHI KAPPA PHI.—A chapter of the Honor Society of Phi Kappa Phi was established at the University during the spring of 1912. To be eligible for membership a student must have been in attendance at the University for at least one year, have been guilty of no serious breaches of discipline, have had at least three years of collegiate training, be within one year of finishing a course leading to a degree, and stand among the first fourth of the Senior class of the University. The numerical grade which must be attained is based on all college

work, wherever done, for which the student receives credit towards a degree.

MEDALS.—Medals are offered (1) to the best declaimer in the Freshman and Sophomore classes and for the best original orations delivered (2) by a member of the Junior, and (3) by a member of the Senior class. The contests are settled in public competition at Commencement. The speakers are limited to four from each class and are selected by the Faculty.

EXPENSES

UNIVERSITY CHARGES.—*Tuition.*—A tuition fee of forty dollars ($40.00) per year is charged every student registered in the College of Law. In the other colleges a student whose legal residence is in Florida is subject to no charge for tuition; a student who is not a legal resident of the State is required to pay a tuition fee of forty dollars ($40.00) per year.

Registration Fee.—This fee of ten dollars ($10.00) per year is charged all students, except one scholarship student from each county in Florida and all graduate students pursuing work leading to a degree higher than that of Bachelor. These two classes of students are charged five dollars ($5.00).

The scholarships referred to are to be obtained from County Superintendents of Public Instruction and must be filed with the auditor on the day of registration.

An additional fee of two dollars ($2.00) is required of students who enter after the day scheduled for registration.

Student Activity Fee.—This fee of fifteen dollars ($15.00), payable on entrance, was voted by the students and approved by the Board of Control. The moneys so derived are used to foster and maintain athletic sports, student publications, literary and debating societies, and other student activities.

Breakage Fee.—In order to secure the University against damage, and to pay for general breakage, etc., the sum of $2.50 is charged. No part of this fee will be refunded. Damage done by individuals and not reported usually consumes all the moneys provided by this fee for covering general breakage.

Damage known to have been done by any student will be charged to his individual account.

Laboratory Fees.—A small fee is required for each course that includes laboratory work, to cover cost of consumable materials, wear and tear of apparatus, and similar items. The

amount of the fee varies with the different courses, in no case exceeding $6.00 per semester for any one course. In every case payment in advance is required.

Infirmary Fee.—All students are charged an infirmary fee of five dollars ($5.00)*. This secures for the student, in case of illness, the privilege of a bed in the infirmary and the services of a professional nurse and of the resident physician, except in cases involving major operations. All students will be given a careful physical examination at the beginning of the session.

Diploma Fee.—A diploma fee of ten dollars ($10.00), payable on or before April 1st of the year of graduation, is charged all candidates for degrees.

Board and Lodging.—Board, lodging, and janitor service will be furnished by the University at a cost of eighty-seven dollars and fifty cents ($87.50) per semester (not including the Christmas vacation). To get advantage of this rate, payment must be made at the beginning of each semester. No refund will be made for less than a month's absence. When not engaged by the semester, board and lodging will be furnished at twenty-two dollars and fifty cents ($22.50) per month.

Under *Board and Lodging* are included meals in the commons and room (with heat, light, janitor service, and access to a bathroom), furnished as stated below. The doors of the rooms are provided with Yale locks. A deposit of 50 cents is required for each key, which will be returned when the key is surrendered. *Janitor service* includes the care of rooms by maids, under the supervision of a competent housekeeper.

Board and lodging in private homes may be secured at the rate of thirty-five to forty dollars ($35.00-$40.00) per month.

Board without Lodging.—Board without lodging will be furnished at the rate of $20.00 per calendar month, payable in advance. No part of this sum will be refunded.

Lodging without Board.—Lodging without board is not furnished.

Furniture.—All rooms are partly furnished and adjoin bathrooms equipt with marble basin and shower with both

*The increase of $2.00 in this fee does not add to the total expenses of the student, since the amount is offset by a decrease in the breakage fee.

hot and cold water. The furniture consists of two iron bedsteads and mattresses, chiffonier or bureau, table, washstand, and chairs. The students are required to provide pillows, bedding, towels and toilet articles for their own use.

Books.—The cost of books depends largely upon the course taken, but is, in no case, a large item of expense, tho in the higher classes the student is encouraged to acquire a few works of permanent value. The average cost of books to academic students is between $12.00 and $15.00 per annum; to law students, $35.00 to $40.00.

Summary.—The following table summarizes the minimum expenses of a Florida student registered in any college save in that of Law:

Tuition	$000.00
Registration Fee	10.00
Breakage Fee	2.50
Student Activity Fee	15.00
Infirmary Fee	5.00
Board and Lodging	175.00
Books (about)	13.50
Laundry (about)	18.00
	$239.00

Students from other states will add a tuition fee of $40.00; those enrolled in the R. O. T. C. will see also page 168. Candidates for degrees will add a diploma fee of $10.00.

REMITTANCES.—*All remittances should be made to the Auditor, University of Florida, Gainesville, Fla.*

OPPORTUNITIES FOR EARNING EXPENSES.—It is often possible for a student to earn a part of his expenses by working during hours not required for his University duties.

A few students are employed as waiters, as janitors, and in other capacities. Such employment is not, as a rule, given to a student otherwise financially able to attend the University, nor is it given to one who fails in any study. Application for employment should be made to Dr. J. E. Turlington, Chairman of the Self-Help Committee.

Altho the employment of students is designed to assist those in need of funds, the payment for their services is in no sense a charity. The rate of remuneration is no higher and the standard of service demanded is no lower than would be the case if the work were done by others than students. If a student employee fails to give satisfaction, he is discharged. Otherwise, provided it is not found to interfere with reason-

able success in his studies and provided he does not commit any breach of good conduct, he is continued in his position as long as he cares to hold it.

Great credit is due those willing to make the necessary sacrifices, nevertheless students are advised not to undertake to earn money while pursuing their studies, unless such action is unavoidable. Proper attention to studies makes sufficient demand upon the time and energy of a student, without the burden of outside duties; such time as the studies leave free can be spent more profitably in recreation.

FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS

FELLOWSHIPS.—In order to encourage young teachers to prepare themselves further for their work, three Teaching Fellowships, each paying $200.00 annually, have been established.

Application for a fellowship must be made in writing to the Dean of the Teachers College or to the President of the University. It must show that the applicant is a college graduate and has ability to profit by the work offered, and must be accompanied by testimonials as to his character.

A Fellow must devote himself to studies leading to the Master's degree in Education. He will be expected to teach four or five hours per week in the Practice High School, under the direction and supervision of the Teachers College, for which he will receive two hours' credit. He may be called upon for minor services, such as conducting examinations, but not for anything that would interfere with his graduate work.

SCHOLARSHIPS.—Thru the generosity of friends, the University is able to offer eight scholarships. (See also College of Agriculture.) Application for a scholarship should be made to the President of the University and should be accompanied by a record of the student's work, statement of his need, and testimonials as to his character. To secure a scholarship:

(a) The student must actually need this financial help to enable him to attend the University.

(b) He must be of good character and habits and sufficiently far advanced to enter not lower than the Freshman class.

1. *United Daughters of the Confederacy Scholarship.*—Established and maintained by the U. D. C. of the State at large. For the grandson of a Confederate soldier. Value $180.00.

2. *Kirby Smith Chapter, U. D. C., Scholarship.*—Established and maintained by the Kirby Smith Chapter, U. D. C., of Gainesville. For the lineal descendant of a Confederate veteran. Value $90.00.

3. *Jacksonville Chapter, U. D. C., Scholarship.*—Established and maintained by the Jacksonville Chapter, U. D. C. For the lineal descendant of a Confederate veteran. Value $180.00.

4. *Tampa Chapter, U. D. C., Scholarship.*—Established and maintained by the Tampa Chapter, U. D. C. For the lineal descendant of a Confederate veteran. Value $180.00.

5. *Katherine Livingstone Chapter, D. A. R., Scholarship.*—Established and maintained by the Katherine Livingstone Chapter, D. A. R., of Jacksonville. Value $250.00.

6. *Knight and Wall Scholarship.**—Established and maintained by the Knight and Wall Company, hardware dealers, of Tampa. Value $245.00.

7. *Arthur Ellis Ham Memorial Scholarship.*—See page 15.

LOAN FUNDS.—The generosity of friends enables the University to lend a few needy students money with which to help defray their expenses. A joint note is to be made by a recipient of a loan and one responsible property holder owning property to a value of not less than $1,000 over and above the exemption privilege. Interest on such loans is at the rate of 7% and is payable yearly, but does not begin until the first of July after graduation, or until one month after a non-graduating recipient has severed his connection with the University. The principal is to be repaid in annual instalments of $100 each, due at the time of interest payments.

Willoughby Memorial Loan Fund.—Established by Professor and Mrs. C. H. Willoughby in memory of their son Paul Willoughby, who died at the University in 1918 while enlisted in U. S. Army training; providing loans of $150 per year each for two advanced students in science, under conditions similar to those affecting loan funds offered by the University.

William Wilson Finley Foundation.—See under College of Agriculture.

State U. D. C. Foundation.—Loan to a lineal descendant

*For particulars, address the Superintendent of Public Instruction, Hillsboro County, Tampa, Fla.

of a Confederate soldier to an amount not exceeding $100 per year.

ALUMNI ASSOCIATION

At the close of their Commencement exercises the class of 1906 organized an Alumni Association. All graduates of the University *and the graduates of the former institutions who have had their diplomas confirmed by the University* are eligible for membership.

Further information concerning the Association may be obtained from any one of the officers: President, Pat Johnston, of Kissimmee; Vice-President, Harry W. Thompson, of Pensacola; Secretary and Treasurer, B. R. Colson, of Gainesville.

STUDENT ORGANIZATIONS AND PUBLICATIONS

ORGANIZATIONS.—Practically every interest of the student-body has a student-controlled organization, but with faculty supervision, for its support. Some of these organizations are mainly religious in character, some social, others purely literary or scientific, still others combine social with other features. Hence there are athletic clubs, in addition to the general Athletic Association of the University; associations of men who have distinguished themselves or who are greatly interested in some activity or study, as, e. g., a Military Club, a Monogram Club, a Chemical Club, honor societies in Agriculture, in Law, etc.; and a Rehabilitation Club. Among those worthy of special mention are the following:

ATHLETIC ASSOCIATION.—This association, composed of the entire student body, has charge of all major and minor sports, under faculty supervision and subject to the rules and regulations of the Southern Intercollegiate Athletic Association and of the Southern Intercollegiate Conference.

GOLF CLUB.—This promising organization has been formed during the present year. It will foster golf playing among the students as a recognized minor sport.

Y. M. C. A.—The Y. M. C. A., under the leadership of the General Secretary, seeks to promote the ideal of the University, that every man should have a strong body, a trained mind, and a Christian experience in order that he may go forth prepared to meet the problems of life.

Clean, wholesome athletics is fostered, efficiency in the

classroom urged, and systematic Bible study promoted. The best available ministers and laymen are brought before the students to the end that the latter may become acquainted with the problems of today.

The Y. M. C. A., in carrying forward this work, deserves the support of every student, alumnus, and parent.

Honor Committee.—In order to carry out the spirit of the "Honor System," which has been in operation at the University for years, each class elects one of its members to represent it on the Student Honor Committee. This committee strives in every way possible to promote among the students honesty in all their work and conducts a fair trial in the rare cases of breaches of the system. Its verdict is final, but is kept secret from all save those concerned.

Literary and Scientific Societies.—See General Statement of each of the five colleges of the University.

Debating Council.—The Debating Council, composed of one representative from each of the Literary Societies, has general charge both of intersociety and of intercollegiate debates. Under its direction a debating contest is held annually between members of each of the five colleges of the University. The winning team gains possession of the Faculty Loving Cup for the ensuing year; three successive victories entitle the society furnishing the debaters to permanent ownership.

Teams representing the University debate annually against teams from the University of South Carolina and the University of Tennessee. In 1921 and 1922 debates were held with the Louisiana State University.

Cosmopolitan Club.—The students of foreign nationality, together with a few Americans, organized in 1918 a club for the purpose of promoting international understanding and friendship. Under its auspices addresses are frequently made, describing customs and institutions of foreign countries. The membership consists at the present time of men from Brazil, British Africa, Ecuador, Italy, Panama, the Philippines, Russia, Serbia, and the United States.

Orchestra.—The orchestra plays for Chapel exercises and furnishes special music on Fridays.

Glee and Mandolin and Guitar Clubs.—The Glee Club develops ability in part-singing and gives much pleasure by adding variety to the Friday morning exercises. The Man-

dolin and Guitar Club, while complete in itself, joins the Glee Club in its annual tour.

Military Band.—The Military Band adds much to the effectiveness of parades. It makes several excursions during the year to neighboring towns. The instruments, valued at over $6,000, are furnished by the War Department.

The Masqueraders.—This dramatic association fosters in its members an appreciation of the drama, and seeks to develop personal power in expression. It stages annually at Gainesville, and at other points in the state, an original play.

PUBLICATIONS. —Beginning with the session of 1909-10 each Junior (or Senior) class has published an illustrated annual, known as the *"Seminole"*.

The *"Florida Alligator"* is a weekly newspaper owned and controlled by the student-body. Its editorial articles discuss University problems from the viewpoint of the undergraduates. It seeks the support of the alumni, who find in it the best means of keeping in touch with the University.

ADMISSION

TERMS.—A candidate for admission must present, along with his scholastic record, a certificate of good moral character. If he be from another college or university, this certificate must show that he was honorably discharged.

No candidate of less than 16 (18 in the College of Law) years of age will be admitted.

METHODS.—There are two methods of gaining admission:

(1) *By Certificate.*—The University will accept certificates from the approved Senior high schools and from accredited academies and preparatory schools of Florida, and from any secondary school elsewhere which is accredited by its state university.

The certificate must be officially signed by the principal of the school attended. It must state in detail the work of preparation and, in the case of Florida high schools, that the course *thru the twelfth grade* has been satisfactorily completed.

Blank certificates, conveniently arranged for the desired data, will be sent to all high-school principals and, upon application, to prospective students.

(2) *By Examination.*—Candidates not admitted by certificate will be required to stand written examinations upon

the entrance subjects. For dates of these examinations, see University Calendar, page 3.

REQUIREMENTS. — *"Entrance Units."* — The requirements for admission are measured in "Entrance Units," based upon the curriculum of the high schools of Florida. A unit represents a course of study pursued thruout the school year with five recitation periods (two laboratory periods being counted as one recitation period) of at least forty-five minutes each per week, four courses being taken during each of the four years. Thus the curriculum of the standard Senior high school of Florida is equivalent to sixteen units.

Number of Units.—Admission to the Freshman class will be granted to candidates who present evidence of having completed courses amounting to sixteen such units.

In no case will credit for more than sixteen units be given for work done at a high school.

Deficiency.—A deficiency of one unit will be allowed, but must be removed by the end of the first year after admission. For admission to the College of Engineering such deficiency must be in an elective, and not in a required subject.

Students who have registered for a University study will not be allowed to make up an entrance condition by examination in this subject, unless the examination be taken on the first Saturday in October of the same school year. The University credit may, however, be used as a substitute for entrance credit, a three-hour course continued thruout the year counting as one unit.

Distribution of Units.—Seven and a half specified units are required in common by all the colleges of the University; other specified units are given below; the remaining units are elective.

UNIVERSITY

English	3	units
History	1	unit
Mathematics	2½	units
*Science	1	unit

*For the College of Engineering the Science must be Physics.

COLLEGE OF ARTS AND SCIENCES
COLLEGE OF AGRICULTURE*
TEACHERS COLLEGE

A. B. Curriculum

Latin ..... 2 units

A. B. S. S. Curriculum

One Foreign Language ..... 2 units

B. S. Curriculum

One Foreign Language or History and Science ..... 2 units

COLLEGE OF ENGINEERING

Mathematics ..... 1½ units

ELECTIVE UNITS.—Elective units are to be chosen from among the subjects regularly taught in a standard high school, altho not more than four will be accepted in vocational subjects—agriculture, mechanic arts, stenography, typewriting, etc. Under exceptional circumstances practical experience in engineering work may be accepted by the College of Engineering in lieu of not more than four elective units.

DESCRIPTION OF UNIT COURSES

The minimum requirements for the specified units, and for the elective units most frequently offered, are as follows:

BOTANY.—One-half or one unit.—Anatomy and morphology; physiology; ecology; natural history and classification of the plant groups. At least twice as much time should be given by the student to laboratory work as to recitation.

CHEMISTRY (PHYSICS).—One unit.—Study of a standard high-school text; lecture-table demonstrations; individual laboratory work, comprising at least thirty exercises from a recognized manual.

ENGINEERING PRACTICE.—Four units.—Regular commercial work for pay in engineering, or in related subjects, may be recognized for entrance credit at the discretion of the faculty of the College of Engineering. The candidate must submit a written statement from his employer, giving the nature and quality of the work done and the date of beginning and

*A. B. Curriculum not offered in College of Agriculture.

of ending. For each unit allowed twelve months of work will be required.

ENGLISH.—Four units.—The exercises in Composition and the use of the Classics should be continued thruout the whole period of preparation. No candidate will be accepted whose work is notably defective in spelling, punctuation, division into paragraphs, or idiom.

(1) *Grammar.*—English Grammar, both in its technical aspects and in its bearings upon speech and writing.

(2) *Composition and Rhetoric.*—The fundamental principles of Rhetoric as given in any standard high-school text; practice in Composition, oral and written.

(3) *Classics.*—The English Classics generally adopted by schools and colleges.

(4) *History of American Literature; History of English Literature.*—One unit.—Supposed to represent the work of the fourth year in English in the high school.

HISTORY.—Four units.

(1)	Ancient History, with particular reference to Greece and to Rome	1 unit
(2)	European History since Charlemagne	1 unit
(3)	English History	1 unit
(4)	American History	1 unit

A year's work based on a textbook of at least 300 pages is required for each unit. The student should know something of the author of the textbook used and give evidence of having consulted some works of reference.

LATIN.—Four units.—The minimum work required is:

(1) First Year.—One unit.—Completion of Collar & Daniell's First Year Latin, Potter's Elementary Latin Course, or other good first-year book.

(2) Second Year.—One unit.—Four books of Caesar's Gallic War; grammar and prose composition thruout the year.

(3) Third Year.—One unit.—Six of Cicero's Orations; grammar and prose composition thruout the year.

(4) Fourth year.—One unit.—The first six books of the Aeneid and as much prosody as relates to accent, versification in general, and to dactylic hexameter.

MATHEMATICS.—Four units.

(1) *Algebra.* — First Year. — One unit. — Elementary operations: factoring, highest common factor, least common

multiple, fractions, simple equations, inequalities, involution, evolution, and numerical quadratics.

(2) *Algebra.* — Second Year. — One unit. — Quadratic equations, ratio and proportion, the progressions, imaginary quantities, the binomial theorem, logarithms, and graphic algebra.

(3) *Plane Geometry.*—One unit.

(4) *Solid Geometry.*—One-half unit.

(5) *Plane Trigonometry.*—One-half unit.

MODERN LANGUAGES.—Two units.—If the student offers only one unit, he must study the language a second year in the University.

French (Spanish).— First Year.— One unit.— Pronunciation; grammar; from 100 to 175 pages of graduated texts, with practice in translating into the foreign language variations of sentences read; dictation; memorizing of short selections.

Second Year.—From 250 to 400 pages of easy prose; translation into the foreign language of variations upon the texts read; abstracts; grammar; exercises; memorizing of short poems.

PHYSICAL GEOGRAPHY.—One unit.—Study of a standard high-school text, together with laboratory and field course.

PHYSICS.—Requirements similar to those for chemistry, which see.

ZOOLOGY.— One-half or one unit.— Study of a standard high-school text and dissection of at least ten specimens. Notebooks with drawings, showing the character of the work completed, must be presented on entrance to the University.

ADVANCED STANDING

Advanced standing will be granted only upon recommendation of the heads of the departments concerned. Fitness for advanced work may be determined by examination or by trial. Students from other institutions of like standing will ordinarily be classified according to the ground already covered.

ORGANIZATION

I. The Graduate School.

II. The College of Arts and Sciences:

(a) A Curriculum leading to the A. B. degree.
(b) A Curriculum leading to the degree of A.B. in the Social Sciences.
(c) A Curriculum leading to the B. S. degree.
(d) A Pre-Medical Course.

III. The College of Agriculture:

Instructional Division:

(a) A Curriculum leading to the B. S. degree in Agriculture.
(b) A Curriculum leading to the title Graduate in Farming.
(c) A Two-Year Course.
(d) A One-Year Course.
(e) A Four-Months' Course.

Experiment Station Division.
Extension Division.

IV. The College of Engineering:

(a) A Curriculum leading to the B. S. degree in Civil Engineering.
(b) A Curriculum leading to the B. S. degree in Electrical Engineering.
(c) A Curriculum leading to the B. S. degree in Mechanical Engineering.
(d) A Curriculum leading to the B. S. degree in Chemical Engineering.

V. The College of Law:

A Curriculum leading to the LL.B. or J. D. degree.

VI. The Teachers College and Normal School:

(a) A Curriculum leading to the A. B. degree in Education.
(b) A Curriculum leading to the B. S. degree in Education.
(c) A Normal Course leading to a Diploma.
(d) The University Summer School.

VII. General (Connected with at least four Colleges):

Division of Military Instruction.
Division of Rehabilitation.
Division of Hygiene (In Cooperation with the Federal Inter-Department Hygiene Board).

VIII. Extension Service.

GRADUATE SCHOOL

ORGANIZATION.—This School is under the direction of the Committee on Graduate Studies, which consists of Professors Anderson, Benton, Farr, Newell, Norman, and Trusler.

Graduate students should register with the Chairman of this Committee.

DEGREES OFFERED.—Courses are offered leading to the degrees of Master of Arts, Master of Arts in Education, Master of Science, Master of Science in Agriculture, and Master of Science in Education.

PREREQUISITE DEGREE.—Candidates for the Master's degree must possess the Bachelor's degree of this institution or of one of like standing.

APPLICATIONS.—Candidates for the Master's degree must present to the Chairman of the Committee on Graduate Studies a written application for the degree not later than the first of November of the scholastic year in which the degree is desired. This application must name the major and minor subjects offered for the degree and must contain the signed approval of the heads of the departments concerned.

When a candidate offers as a part of his work any course not sufficiently described in the catalog, he must include in his application an outline or description of that course.

TIME REQUIRED.—The student must spend at least one entire academic year in residence at the University as a graduate student, devoting his full time to the pursuit of his studies.

WORK REQUIRED.—The work is twelve hours per week. Six hours of this work must be in one subject (the major) and of a higher grade than any course offered for undergraduate students in that subject. The other six hours (the minor or minors) are to be determined and distributed by the professor in charge of the department in which the major subject is selected. No course designed primarily for students of a lower grade than the Junior class will be acceptable as a minor. While the major course is six hours, these hours are not the same as undergraduate work, for in general the major work will require at least two-thirds of the student's time.

To obtain credit for a minor the student must attain a grade of not less than eighty-five per cent.

DISSERTATION.—It is customary to require a dissertation showing original research and independent thinking on some subject accepted by the professor under whom the major work is taken, but this requirement may be waived at the option of the professor, subject to the approval of the Committee on Graduate Studies. If the requirement be not waived, the dissertation must be in the hands of the committee not later than two weeks before Commencement Day.

SUMMER SCHOOL.—Four complete summer terms devoted entirely to graduate work will satisfy the time requirement.

The application must be presented by the middle of the first term.

COLLEGE OF ARTS AND SCIENCES

JAS. N. ANDERSON, *Dean*

FACULTY.—Jas. N. Anderson, E. C. Beck, J. R. Benton, A. P. Black, L. M. Bristol, L. W. Buchholz, M. D. Cody, C. L. Crow, H. S. Davis*, H. O. Enwall, J. M. Farr, W. R. Hale, J. M. Leake, T. R. Leigh, J. P. Little, W. S. Perry, J. S. Rogers, T. M. Simpson, K. T. Steik, J. Weil.

GENERAL STATEMENT

AIM AND SCOPE.—The tendency of universities at the present time seems to be to reach out their arms farther and farther into the domain of knowledge and to become more and more places where the student may expect to be able to acquire any form of useful knowledge in which he may be interested. In the center, however, there is still found the College of Arts and Sciences, the pulsating heart, as it were, sending its vivifying streams to the outermost tips of the institution.

The aim of the college is to prepare for life, it is true, but not so directly and immediately as do the professional schools. It is a longer, but a better road, for those who are able to travel it, to distinction and ultimate success in almost any calling. Especially in the case of the learned professions, it is becoming clearer that a man must first get a liberal education, if possible, before entering upon his professional studies.

The purpose and aim of the College of Arts and Sciences is to impart culture and refinement, to train the mind and strengthen the intellect, to build up ideals and establish the character, to enlarge the vision, to ennoble the thoughts, to increase the appreciation of the beautiful and the true, to add charm to life and piquancy to companionship, to make the man a decent fellow, a useful citizen, an influential member of society in whatever community he may be thrown, in whatever field his life-course may be run.

But if the student wishes to examine the practical side exclusively, he will find that there is also something practical in all these courses. For instance, they are all valuable for him who wishes to learn to teach those subjects. Moreover,

*Resigned.

the use of electives gives the student an opportunity to specialize in some branch according to his inclination and in furtherance of his plans.

ADMISSION.—For full description of requirements for admission and of unit courses, see pages 42 to 46, inclusive.

LITERARY SOCIETIES.—The Literary Societies are valuable adjuncts to the educational work of the College. They are conducted entirely by the students and maintain a high level of endeavor. The members obtain much practical experience in the conduct of public assemblies. They assimilate knowledge of parliamentary law, acquire ease and grace of delivery, learn to argue with coolness of thought and courtesy of manner, and are trained in thinking and in presenting their thoughts clearly and effectively while facing an audience. All students are earnestly advised to connect themselves with one of these societies and to take a constant and active part in its work.

CHEMICAL SOCIETY.—The Flint Chemical Society is organized by and for the students of the department of chemistry. The purpose of the society is to stimulate the interest of the beginning student of chemistry by giving him a correct idea of the broadness of the field and its far-reaching importance in the arts and industry. Those students who are so inclined are thus encouraged to continue the study of chemistry. The programs consist of lectures by various members of the faculty, by advanced students of the department, and by outside speakers when they can be secured. An open forum is held at intervals when all members take part in the discussion. Motion pictures are used to good advantage to illustrate the application of chemical principles in various important industries. There are no restrictions as to membership, all chemistry students being urged to affiliate with it and attend its programs. It meets on alternate Wednesday evenings during the college year.

DEGREES.—The College of Arts and Sciences offers courses leading to the degrees of Bachelor of Arts (A.B.), Bachelor of Arts in the Social Sciences (A.B.S.S.), and Bachelor of Science (B.S.).

SUBJECTS OF STUDY.—The subjects of study leading towards the degrees offered by the College of Arts and Sciences are divided into the following four groups:

I.	II.	III.	IV.
Military Science	French	Bible	Agriculture
Physical Education	Greek	Economics	Astronomy
	Latin	Education	Bacteriology
	Spanish	English Language and Literature	Biology
		History	Botany
		Philosophy	Chemistry
		Political Science	Drawing
		Psychology	Descriptive Geometry
		Sociology	Geology
			Mathematics
			Mechanics
			Physics
			Physiology
			Surveying
			Zoology

REQUIREMENTS FOR DEGREES.—For each of the degrees offered, A.B., A.B.S.S., and B.S., there must be taken a total of sixty-eight hours, of which at least the last fifteen hours must be pursued in residence at this University.

For the A.B. degree eight hours must be taken in Group I, twelve hours in each of groups II and IV, and eighteen hours in group III; four hours may be taken in any group; the remaining fourteen hours (including the "major") must be chosen from groups II and III and (pure) mathematics. In group II two courses of a grade as high as I must be taken.

For the A.B.S.S. degree the "major" must consist of nine hours (not counting the Freshman work) either in the Department of History and Political Science* or in the Department of Sociology and Economics*; twenty-one hours (not including the Freshman work) must be selected from Group III; a part of the free electives may be taken from courses offered in other colleges of the University with the consent of the Deans involved and with the approval of the Head of the Department in which the "major" falls.

The A.B.S.S. degree probably will not be conferred until 1924.

For the B.S. degree eight hours must be taken in group I, nine hours in group II (three of which must be in a course as high as I), fifteen hours in group III, and twenty-four hours (including the "major") from group IV; the remaining twelve may be chosen from any group or groups.

The "major" must consist of nine hours in one department

*It will be noted that students registered for the regular A.B. degree may major in either of these departments.

(not counting the Freshman work) and must be approved by the head of the department chosen. The choice of electives must meet with the approval of the Dean.

COMBINED ACADEMIC AND LAW COURSE.—For not more than twelve of the free elective hours required for any of the Bachelor's degrees conferred by the College of Arts and Sciences there may be substituted an equal number of hours from the first year of the College of Law.

The Bachelor's degree in Arts or Science will not be conferred, however, upon a candidate offering twelve hours in Law until he has satisfactorily completed the second year of the course in the College of Law.

MINIMUM AND MAXIMUM HOURS.—The student must take at least fourteen hours of work (not including Military Drill and Physical Education) and in general will not be permitted to take more than eighteen; but if in the preceding semester he has attained an average of eighty-seven or more and has not failed in any subject he may be permitted to take as many as twenty-one hours, and if he has attained an average of ninety with no failures he may be permitted to take as many as twenty-three hours.

PRE-MEDICAL COURSE.—Students intending to study medicine are advised to take the regular B.S. course. Inasmuch, however, as many students are unable to spend four years on a non-professional course, the University offers a Two-Year Pre-Medical course.

CURRICULUM

Leading to the Degree of Bachelor of Arts

Freshman Year

NAMES OF COURSES	NATURE OF WORK	HOURS PER WEEK
English I	Rhetoric	3
English II	History of English Literature	2
Foreign Language I	French, Greek, Latin, or Spanish	3
†History I	Medieval History	3
Mathematics I	Trigonometry, College Algebra, Plane Analytical Geometry	3
*Military Science and Drill I	Regulations and Drill	3
Physical Education I		1
		18

*Students excused from Military Science and Drill must substitute for it some three-hour course to be approved by the Dean.

†Greek may be substituted, in which case History I must be taken in the Sophomore year.

Sophomore Year

Biology I*a* and III*b* or Chemistry I or Physics I and II or Physics V	4 or 5
Group II	3
Group III	3
Group II or III or IV	3
*Military Science and Drill II	3
Physical Education II	1
	17 or 18

CURRICULUM

Leading to the degree of Bachelor of Arts in the Social Sciences.

Freshman Year

NAMES OF COURSES	HOURS PER WEEK
English I	3
Sociology A*a* and Economics B*b*	3
Foreign Language	3
History I or Political Science I	3
Mathematics I	3
*Military Science and Drill I	3
Physical Education I	1
	19

Sophomore Year

Chemistry I or Physics I and II or V or Biology I*a* and III*b*	4 or 5
Group II	3
Group III	3
Group II, III or IV	3
*Military Science and Drill II	3
Physical Education II	1
	17 or 18

*Students excused from Military Science and Drill must substitute for it some three-hour course to be approved by the Dean.

CURRICULUM

Leading to the Degree of Bachelor of Science

Freshman Year

NAMES OF COURSES	NATURE OF WORK	HOURS PER WEEK
Chemistry I	General Chemistry	5
English I	Rhetoric	3
Foreign Language	French, Greek, Latin, or Spanish	3
Mathematics I	Trigonometry, College Algebra, Plane Analytical Geometry	3
*Military Science and Drill I	Regulations and Drill	3
Physical Education I		1
		18

Sophomore Year

Biology I*a* and III*b*	4
or	
Physics I and II	5
or	
Physics V	5
*Military Science and Drill II	3
Physical Education II	1
	17 or 18

In the Junior and Senior years candidates for either of the degrees offered must choose their studies so as to conform to the general "Requirements for Degrees" of this college.

CURRICULUM

Two-Year Pre-Medical Course

First Year

NAMES OF COURSES	NATURE OF WORK	HOURS PER WEEK
Biology I*a* and III*b*	General Course	4
Chemistry I	General Chemistry	5
English I	Rhetoric	3
Foreign Language I	Elementary Course	3
*Military Science and Drill I	Regulations and Drill	3
Physical Education I		1
		19

Second Year

Advanced Biology	3
Chemistry III and V	8
Physics I and II, or Physics V	5
*Military Science and Drill II	3
Physical Education II	1
	20

*Students excused from Military Science and Drill must substitute for it some three-hour course to be approved by the Dean.

DEPARTMENTS OF INSTRUCTION

ANCIENT LANGUAGES

Professor Anderson

The study of the classics contributes largely to general culture. In addition to the recognized and peculiar disciplinary value of such studies and their conspicuous service in cultivating the literary sense and developing literary taste, they have a more immediate value and office as aids to the comprehension and interpretation of modern languages and literatures. A thoro study and a full understanding of the modern languages, especially the Romance languages and our own tongue, demand a considerable preliminary acquaintance with Latin and Greek. Thus from two points of view, that of their own intrinsic beauty and value as culture studies and that of aids to the study of other languages, Latin and Greek command our attention and call for a large place in any curriculum which proposes to issue in a liberal education.

Courses A, B, and C, if not used for entrance units, may be taken for college credit.

LATIN

LATIN A.—First Year Latin, based on a book for beginners. *(3 hours.)*

LATIN B.—Second Year Latin, based on Caesar, with grammar and prose composition. *(3 hours.)*

LATIN C.—Third Year Latin, based on Cicero and Virgil, with grammar and prose composition. *(3 hours.)*

LATIN I.—Ovid, about 2,000 verses selected from his various works, but mainly from the Metamorphoses; Versification, with especial reference to the Dactylic Hexameter and Pentameter; Cicero's De Senectute and De Amicitia. A rapid review of forms and the principal rules of Syntax; a short weekly exercise in prose composition. *(3 hours.)*

LATIN II.—Selections from the Roman historians, especially Livy and Sallust, and from the Satires, Epistles, Odes, and Epodes of Horace, with a study of the Horation Metres. *(3 hours.)*

LATIN III.—Juvenal's Satires, with some omissions; Tacitus, parts of the Histories of Annals; selections from Catullus, Tibullus, Properties, and Ovid. *(3 hours.)*

LATIN IV.—Several plays of Plautus and Terence; Tacitus, Germania and Agricola; selections from Seneca, Gellius, and Quintilian. *(3 hours.)*

LATIN V*b*.—History of Roman Literature, preceded by a short study of Roman Life and Customs. *(Second semester; 3 hours.)*

LATIN VI.—Grammar and Prose Composition: an intermediate course in Prose Composition adapted to the needs of students taking Latin I or II and consisting of weekly written exercises and some oral work; in connection with this there will be a general review of Latin Grammar with some more advanced work, both in forms and syntax. *(2 hours.)*

LATIN VII.—Advanced Prose Composition: a continuation of Latin VI, open only to those students who have completed Latin VI or equivalent. *(2 hours.)*

GREEK

GREEK A.—The forms and most important principles of the syntax; numerous exercises, partly oral, partly written, and some practice in conversation and sight reading. One book of Xenophon's Anabasis, with exercises in Prose Composition and study of the Grammar. *(3 hours.)*

GREEK I.—Xenophon's Anabasis, Books II, III, and IV, selections from Lucian and the easier dialogues of Plato; sight translation; Prose Composition; Grammar. *(3 hours.)*

GREEK II.—Select orations of Lysias or other Attic orators, with informal talks on Athenian Laws and Customs; parts of the Iliad and Odyssey of Homer; Prosody. *(3 hours.)*

GREEK III.—Selections from the Greek historians, especially Herodotus and Thucydides; from the Greek dramatists, especially Euripides and Sophocles; from the lyric fragments of Alcaeus, Sappho, etc. *(3 hours.)*

GREEK IV*a*.—History of Greek Literature, preceded by a short study of Greek Life and Customs. A knowledge of the Greek language is highly desirable, but is not required for this course. *(First semester; 3 hours.)*

GREEK V.—Grammar and Prose Composition: an intermediate course in Prose Composition adapted to the needs of students taking Greek II or III and consisting of weekly written exercises and some oral work; in connection with this

there will be a general review of Greek Grammar with some more advanced work, both in forms and syntax. *(2 hours.)*

GREEK VI.—Selections from the Septuagint and from the New Testament; class and parallel translations; vocabulary, grammar, and stylistic features stressed. *(3 hours.)*

BIBLICAL INSTRUCTION

Professor Buchholz

The following courses are offered to Juniors and Seniors, embracing such aspects of Biblical study as the University is prepared to give, with a view to providing a major subject in the Bachelor of Arts curriculum that will permit students to begin preparation for work as secretary or physical director of the Y. M. C. A., for welfare work in mills or social settlements, or for the ministry. The courses offered will be conducted by the instructors in the departments under which the various aspects of the subject naturally fall and will be given in a spirit free from sectarianism.

BIBLE I.—*Old Testament History.*—The history of the Israelitish nation as narrated in the books of the Old Testament; the connections between sacred and profane history. The aim is to give the student some conception of the development of the cultural, ethical, and spiritual life of the nation. *(3 hours thruout the year. Professor Buchholz.)*

BIBLE II.—*New Testament History.*—The period from Herod the Great to the death of John the Evangelist, with special attention to the life of Christ and the development of the early church. Lectures, Bible readings, textbook. *(3 hours. Professor Buchholz.)*

BIBLE III.—*The English Bible as Literature.*—Literary types found in the Bible and the excellence of the work as compared with other great examples of literature. The diction of the 1611 version will be contrasted with that of other translations and its effect upon English literature will be demonstrated. *(Professor Farr.)*

BIBLE IV.—*Old and New Testament Greek.*—See Greek VI. *(3 hours. Professor Anderson.)*

BIBLE V.—*The Bible as an Ethical and Religious Guide.*—Those parts of the Old and New Testament which bring out most vividly and directly the moral and religious elements will receive most attention. The aim is to give the student a keen

appreciation of the Bible as the best guide for human conduct. Lectures, Bible readings, studies of great sermons, textbooks on Evidences of Christianity. *(3 hours.)*

BIOLOGY AND GEOLOGY

Professor Rogers Assistant Professor Cody

BIOLOGY

For a description of the laboratories and general equipment of the department, see pages 25 and 26.

Not all of the elective courses described below are given in any one year, but any course, if elected by a sufficient number of students, will be offered as often as each alternate year.

BIOLOGY I*a*.—*General Biology*.—The fundamental principles of biology. This course is given in two sections, one dealing primarily with animals, the other primarily with plants. The same section must be elected for both lectures and laboratory work. This course is a prerequisite for all other courses in biology. *(2 lecture and 2 laboratory periods per week; 4 hours; laboratory fee $2.00.)*

BIOLOGY II*b*.—*General Botany*.—The vegetable functions, structure and life-histories of plants. *(2 class and 2 laboratory periods per week; 4 hours; laboratory fee $1.00.)*

BIOLOGY III*b*.—*General Zoology*.—A survey of the animal kingdom. Classification, structure, life processes and ecological relationships of animals. As far as possible the emphasis will be placed upon the local fauna. *(2 lecture and 2 laboratory or field periods per week; 4 hours; laboratory fee $1.00.)*

BIOLOGY IV*a* OR *b*.—*Zoological Technique*.—This course is planned primarily for students who plan to teach biology in secondary schools, but will be adapted to pre-medical students and others who look forward to advanced laboratory work. Training in microscopic and macroscopic preparations, photography and chart making, and methods of collecting and preserving specimens. *(1 lecture and 6 actual hours of laboratory work per week; 3 hours; laboratory fee $3.50.)*

BIOLOGY V*a*.—*Comparative Anatomy of Vertebrates*. *(2 lectures and 2 laboratory periods per week; 4 hours; laboratory fee $3.00.)*

BIOLOGY V*b*.—*Physiology*.—The animal body considered as a living mechanism, with special reference to the higher

vertebrates. The laboratory work will consist of demonstrations and experiments on the special physiology of the frog and of the cat. *(2 lecture and 2 laboratory periods per week; 4 hours; laboratory fee $3.50.)*

BIOLOGY VI.—*Economic Zoology.*—This course, designed primarily for agricultural students, is devoted chiefly to the study of insects and related forms, special attention being given to those of economic importance. This is followed by a brief consideration of the principal groups of vertebrates in their relation to agriculture. *(2 class periods and 1 laboratory period per week; 3 hours; laboratory fee $1.50 per semester.)*

BIOLOGY VII*b*.—*Vertebrate Embryology.*—Lectures and laboratory work on the development of animals with special reference to the chick. *(2 lecture and 2 laboratory periods per week; 4 hours. Prerequisite: Biology IIIb; laboratory fee $3.00.)*

BIOLOGY VIII*a*.—*Genetics.*—The phenomena of variation and inheritance. The last quarter of this course will deal with the questions and problems of human heredity. *(2 lecture and 1 laboratory periods per week; 3 hours; laboratory fee $1.00.)*

BIOLOGY VIII*b*.—*Animal Ecology.*—The relationship of the animal to its environment. The lectures will deal with the general principles of ecology. The field and laboratory periods will be devoted to the behaviour and habitats of local animals. *(2 lecture and 2 field or laboratory periods per week; 4 hours. Prerequisite: Biology IIIb; laboratory fee $2.00.)*

BIOLOGY IX*a*.—*Plant Physiology.*—The fundamental life-processes, including digestion, assimilation, growth, respiration, reproduction, etc. *(1 class and 2 laboratory periods per week; 3 hours. Prerequisites: Biology IIb and Chemistry I; laboratory fee $2.00.)*

BIOLOGY IX*b*.—*Plant Histology and Anatomy.*—The study of plant tissues and the technic of fixing, sectioning, staining, etc. *(1 class and 2 laboratory periods per week; 3 hours. Prerequisite: Biology IXa; laboratory fee $1.00.)*

BIOLOGY X*a*.—*Plant Pathology.*—The causal agents, symptoms, diagnosis, and treatment of truck and citrus diseases. *(1 class and 2 laboratory periods per week; 3 hours. Prerequisite: Biology IXa and XIa; laboratory fee $3.00.)*

BIOLOGY XI*a*.— *General Bacteriology.*—The morphology, physiology, and cultivation of bacteria and related micro-

organisms. *(2 class and 2 laboratory periods per week; 4 hours. Prerequisite: Chemistry I; laboratory fee $3.00.)*

BIOLOGY XII*b*.—*Agricultural Bacteriology*.—Soil bacteria and their influence on soil fertility, and bacteria in relation to milk and its products. *(1 class and 2 laboratory periods per week; 3 hours. Prerequisite: Biology XIa; laboratory fee $3.00.)*

BIOLOGY XIII*b*.— *Sanitary Bacteriology*.—The principles of water supply, sewage disposal, disinfection, and the control of contagious diseases. *(1 class and 2 laboratory periods per week; 3 hours. Prerequisite: Biology XIa; laboratory fee $3.00.)*

BIOLOGY XIV*ab*.—*Ecological Botany*.—A systematic study of plants and their relations of structure and habit to the conditions under which they live. *(3 hours. Prerequisite: Biology II.)*

GEOLOGY

GEOLOGY I*a*.—*Physical Geology*.—Designed as an introduction to dynamical and structural geology. *(3 hours.)*

GEOLOGY I*b*.—*Historical Geology*.—A study of the geological history of the earth and its inhabitants. *(3 hours. Prerequisites: Geology Ia and Biology IIIb.)*

CHEMISTRY

Professor Leigh Assistant Professor Black
Assistant Professor Steik

The aim of the Department of Chemistry is two-fold. It offers to the general student the opportunity of becoming acquainted with the principles of this science and gives him practice in the fundamental methods used in a chemical laboratory. To those students who wish to specialize in chemistry, the Department offers superior advantages for more advanced work both practical and theoretical. The Department also possesses a growing collection of reference books which will meet the requirements of students especially interested in chemistry; and is supplied with equipment for instruction in general, organic, analytical, industrial and agricultural chemistry.

The Flint Chemical Society, a voluntary association of students in this department, is described on page 51.

CHEMISTRY I.—*General Chemistry.*—A course for freshmen. Lectures and recitations on the elements and their compounds and on the fundamental laws and theories of chemistry, supplemented by laboratory work. Three lectures or recitations and two laboratory exercises of two hours each a week. Emphasis is placed upon the intelligent writing of reactions, and the solving of problems. *(5 hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY III.—*Qualitative Analysis.*—This course includes the general reactions of the metals and acids with their qualitative separation and identification. While chiefly laboratory work, it is amply supported by lectures. This course extends thruout the year; one class starts the first semester, the other the second semester. *(Prerequisite: Chemistry I; 3 hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY IV*ab.*—*Agricultural Chemistry.*—For the first semester this course is identical with Chemistry V below. For the second semester it includes lectures, recitations and laboratory work arranged with special reference to the study of soils, fertilizers and agricultural products. *(Open only to agricultural students. Prerequisite: Chemistry I; 5 hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY V.—*Organic Chemistry.*—Lectures, recitations and laboratory exercises in the aliphatic and aromatic series, planned for students specializing in chemistry and pre-medical and agricultural students. *(Prerequisite: Chemistry I; 3 class and 2 laboratory periods per week; 5 hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY VI.—*Industrial Chemistry.*—See Chemical Engineering.

CHEMISTRY VII*a.*—*Quantitative Analysis.*—Gravimetric analysis of simple compounds, followed by the analysis of such materials as phosphate rock, simple alloys, limestone and Portland cement. Weekly lecture-recitation for theory and practice of Stoichiometric calculations and the use of logarithmic factors. *(Laboratory fee $5.00.)*

CHEMISTRY VII*b.*—*Quantitative Analysis.*—Volumetric methods in Acidimetry and Alkalimetry, Oxidation and Reduction, Iodometry, and Precipitation. Weekly lecture-recitation for theory and practice of stoichiometric calculations. *(Laboratory fee $5.00.)*

CHEMISTRY VIII*a*.—*Organic Preparations.*—The preparation of a number of typical organic compounds. Discussions of principles and theories. *(Prerequisite: Chemistry V; first semester; 3 hours; laboratory fee $5.00.)*

CHEMISTRY VIII*b*.—*Inorganic Preparations.*—The preparation of a number of typical inorganic compounds. Collateral reading and quizzes. *(Prerequisite: Chemistry VIIa; second semester; 3 hours; laboratory fee $5.00.)*

CHEMISTRY IX*b*.—*Advanced Agricultural Chemistry.*—Laboratory assigned readings, class reports and discussions, adapted to the needs of students in agriculture and kindred lines. *(Prerequisites: Chemistry IVab and VIIa; prerequisite or corequisite Chemistry XIIb; second semester; 3 hours; laboratory fee $5.00.)*

CHEMISTRY X*a*.—*Water Analysis.*—In this course waters are examined to determine their potability and suitableness for steam raising and other purposes. *(Prerequisite: Chemistry VIIa, and Chemistry VIIb; 3 hours; laboratory fee $2.50.)*

CHEMISTRY X*b*.—*See Chemical Engineering.*

CHEMISTRY XI.—*Physical Chemistry.*—Lecture and recitations covering the gaseous, liquid and solid states of water; equilibrium and velocities of reactions; electro-chemistry. Laboratory studies in physico-chemical measurements. Determination of molecular weights; study of solutions thru conductivity and other methods; calorimetry; and the use of such instruments as the refractometer, polariscope, and spectroscope. *(Prerequisites: Chemistry III and Chemistry V; 3 hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY XII*a*.—*Advanced Organic Chemistry.*—Special lectures and collateral readings. Graduate course. *(2½ hours.)*

CHEMISTRY XII*b*.—*Chemical Research. (2½ to 5 hours; laboratory fee $5.00.)*

CHEMICAL ENGINEERING

Professor Leigh Assistant Professor Black
Assistant Professor Steik

CHEMISTRY III*e*.—*Qualitative Analysis.*—Mainly laboratory work with class hour for theory, reports and tests by

arrangement. This course is given twice a year. Students may begin the course the first or the second semester. (2½ *hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY VI.—*Chemistry Technology.*—Consideration of chemical principles involved in manufacturing and refining products of commercial importance: Fuels, sulphuric acid, the soda and chlorine industries, fertilizers, cements, glass, pigments, coal tar, mineral oils, soap, starch, sugar, fermentation, industries, explosives, textiles, paper, leather, etc. Visits are made to such factories and chemical plants as may be accessible. *(Required of chemical engineering students; Senior year; 3 hours.)*

CHEMISTRY X*b*.—*Engineering Chemistry.*—Analysis of materials connected with engineering: Fuels, boiler waters, iron and steel, Portland cements, asphalt and coal tar products, mineral oils, vegetable oils, fats and waxes, paints, fertilizers, soaps, and food products. *(Required of chemical engineering students; Senior year; second semester; 10 actual hours; laboratory fee $5.00.)*

CHEMISTRY XI.—*Physical Chemistry.*—See Chemistry.

ENGLISH LANGUAGE AND LITERATURE

Professor Farr — Associate Professor Beck
Instructor Weedon — Mr. Ball

ENGLISH I.— *Advanced College Rhetoric.*— Designed to train students in methods of clear and forceful expression. Instruction is carried on simultaneously in formal rhetoric, in rhetorical analysis, and in theme writing, the constant correlation of the three as methods of approach to the desired goal being kept in view. In addition a reading course is assigned each student. *(Required of all Freshmen; 3 hours.)*

ENGLISH II.—*History of Literature.*—An outline course in the historical development of the English literature. Selections from important prose writers and poets; lectures on the history of the language and literature; a manual for reference; frequent reports from the individual students; constant use of the University library. *(Required of Freshmen in A.B. course; 2 hours.)*

ENGLISH III*a*.—*Description and Narration.*—A course for those who have completed English I and who desire to continue composition work. Practice in writing rather than

rhetorical analysis will be emphasized. Text-book work will be supplemented by lectures and application of principles. Pictorial writing and incidental description will be stressed. Narrative practice will include the anecdote, tale, feature story, short-story, and fanciful and real narratives. *(First semester; 3 hours. Prerequisite: English I.)*

ENGLISH III*b*.— *Exposition.*— Study and composition of the editorial paragraph, editorial article, definition, criticism, formal essay, and informal essay. Some time is spent on special feature articles. *(Second semester; 3 hours.)*

ENGLISH IV*a*.—*Milton and the Epic.*—A study of Paradise Lost, around which are grouped studies in the Age of Milton and in the Epic as a type of Comparative Literature. The first four books of the poem are read in class; written reviews on the others alternate each week with essays from the student and lectures by the instructor. Readings in the minor poets of the age and in English translations of the great epics are assigned. *(First semester; 3 hours.)*

ENGLISH IV*b*. — *Shakespeare and the Drama.* — Three Shakespearian plays are read in class. On eight others a written review each fortnight, and on the alternate week essays from the students and lectures by the instructor. Readings in the English drama from the Cycle plays to contemporary production are assigned. *(Second semester; 3 hours.)*

ENGLISH V*a*.—*The Short-Story.*—An extensive study of American, French, English, Russian, Scandinavian, Italian, and German short-stories. Discussion and study of the conte, or short-story. Constant use of various texts and the library. The course is planned to furnish the student with a wide knowledge of short-stories and short-story writers to serve as a foundation for actual production. *(First semester; 3 hours. Prerequisite: Eng. I.)*

ENGLISH V*b*. — *Writing the Short-Story.* — Primarily a writing course. Discussion of various story types and story ideas. Round tables on original plots. Current magazines and their wants. Preparing and marketing manuscripts. *(Second semester; 3 hours.)*

ENGLISH VI*a*.—*American Poetry.*—A rapid survey of the development of poetry in the United States; critical study of a few of the more important authors (Bryant, Whittier, Longfellow, Emerson, Lowell, Poe). *(First semester; 3 hours.)*

ENGLISH VI*b*.— *Southern Literature.*— A detailed study, with extensive reading and essay work; examination of the claims of Florida authors. *(Second semester; 3 hours.)*

ENGLISH VII.—*The English Novel.*—The student reads a list of novels chosen to illustrate chronology and variety of species, analyzes minutely one novel from the technical side, masters the entire work and life of one novelist, and compares closely a novel and a dramatized version of it. *(3 hours.)*

ENGLISH VIII*a*.—*Browning.*—Lectures and written exercises on Robert Browning's poems and dramas. Shorter Poems: Rabbi Ben Ezra, Andrea del Sarto, Songs from Pippa Passes, Childe Roland, Abt Vogler, My Last Duchess. Dramas: Luria, The Return of the Druses, A Blot in the 'Scutcheon. *(First semester; 3 hours. Prerequisite: Eng. II.)*

ENGLISH VIII*b*.—*Modern Poetry.*—Present-day poems and poets. American and English writers stressed. Discussion of poetic values and modern poetic tendencies. *(Second semester; 3 hours. Prerequisite: Eng. II.)*

ENGLISH IX.—*The Romantic Revival.*—A study in literary movement: the causes and forces which underlie the movement, its phenomena and the authors and works which exhibit them, and a comparison with other movements in literature. The work of Prof. Beers will be used as a basis and the student will be led, by means of extensive reading, by investigation and essays, and by lectures, to realize the truth of his statements. *(3 hours.)*

ENGLISH X.—*Anglo-Saxon Grammar and Reading.*—Drill in the forms of the early language and an elementary view of its relation to the other members of the Aryan family and of its development into Modern English. The texts in Bright's Anglo-Saxon Reader are studied, and Cook's edition of Judith is read. *(3 hours.)*

ENGLISH XI.—*Chaucer and Middle English Grammar.*— During the first semester the works of Chaucer are read in and out of class. Pronunciation, forms, scansion, condition of text, analogs, and sources are examined. During the second semester, Morris and Skeats' Specimens, Part II, is studied in connection with informal lectures on Middle English viewed as developing from Anglo-Saxon into Modern English. *(Prerequisite: English X; 3 hours.)*

ENGLISH XII.—*Engineering Exposition.*—An attempt to give special training to Engineering students in the preparation of the various kinds of writing they will be called upon to do in the pursuit of their profession. It will consist largely of the writing of papers (upon subjects assigned by the departments in the College of Engineering), which will be criticised and revised. *(Engineering Seniors; 1 hour.)*

ENGLISH XIII.—*Newspaper Writing.*—Designed to train students to write clearly and concisely for newspapers. A small, four-sheet paper, twice a month, will furnish the laboratory work. Journalism. *(1 hour.)*

EXPRESSION AND PUBLIC SPEAKING

Mr. Chapman

EXPRESSION.—Particular attention is given to establishing a correct method of breathing, to correcting faulty articulation, and to teaching the principles of interpretation by voice, gesture, and facial expression.

A small tuition fee is charged.

PUBLIC SPEAKING.—Students are instructed in the art of preparing and of delivering debates, orations, and occasional addresses.

The department always shows a willingness to co-operate with the Committee on Public Debating and with the Debating Council.

ALPHA PHI EPSILON.—A chapter of the Honorary Fraternity of Alpha Phi Epsilon was established at the University during the spring of 1921. The objectives of the fraternity are to honor those who take active parts in debating; to unite them in their efforts to spread abroad, and arouse where dormant, the gospel of preparation for the times in life when every ex-college student will be faced with the necessity for speaking in some public place; to encourage all inter-class, inter-organization, and inter-collegiate contests in public speaking; to bring about a serious study of parliamentary law; and in every way possible to raise the standards of public speaking, both prepared and extempore.

HISTORY AND POLITICAL SCIENCE

Professor Leake

The aims of this department are to give that knowledge of the facts and philosophy of History which belongs to a liberal education, to equip the student for more advanced work in the historical and social sciences, and to prepare the student for journalism or for the study of the law. With these ends in view the courses are planned to cover a broad field of study in a thoro manner. The department has the necessary library authorities for adequate collateral reading. All students beginning college work in History are advised when possible to take History I before taking up any of the more advanced courses.

The courses in Political Science are planned so that emphasis is laid upon the organization and functions of national, state, and local governments in the United States, with the dual purpose of preparing students for the privileges and responsibilities of citizenship, and of familiarizing them with a concrete example of government, as a foundation for more advanced work in Political Science. Several advanced courses are offered in Constitutional Law, International Law, and Comparative Government.

All the advanced courses offered are not given in any one year.

HISTORY

HISTORY I*a* and I*b*.—*Europe During the Middle Ages.*—A general course in the history of Western Europe from the Teutonic migrations to the close of the Seven Years' War. *(3 hours.)*

HISTORY II*a* and II*b*.—*American History, 1492 to 1830.*—The purpose of this course is to familiarize students with the history of America and of American institutions. Beginning with the period of discovery and colonization a detailed study is made of each colony. The Revolutionary movement, the period of the Articles of Confederation, the adoption of the Federal Constitution, and the social, political, and economic development of the United States up to 1830 are subjected to close analysis. *(3 hours.)*

HISTORY III*a* and III*b*.—*American History, 1830 to the Present.*—The background and causes of the War between the States, the rise and fall of the Confederacy, the Reconstruc-

tion Period, the industrial expansion of the United States, and America as a world-power. Especial emphasis is laid on our international relations. *(3 hours.)*

HISTORY IV*a* and IV*b*.—*Modern European History.*—The characteristic features of the Old Regime, the French Revolutionary and Napoleonic Periods, and the development of Europe from the Congress of Vienna to the Congress of Versailles. *(3 hours.)*

HISTORY V*a* and V*b*.—*English History.*—A brief survey of English History from the Anglo-Saxon invasions to the Norman Conquest, and a more detailed study of the period from 1066 to the present. *(3 hours.)*

HISTORY VI*a* and VI*b**.—*The Renaissance and the Reformation.*—A study of the causes, development and results of these great intellectual and religious movements. *(3 hours.)*

POLITICAL SCIENCE

POLITICAL SCIENCE I*a*. — *American Government and Politics.*—A study of the structure and functions of our national and state governments. Thruout the course present-day political problems of national and local interest will be made subjects of class discussion. *(First semester; 3 hours.)*

POLITICAL SCIENCE I*b*.—*Municipal Government.*—An outline of the growth of American municipalities and a study of the organs and functional mechanism of modern cities of the United States and Europe. Emphasis is laid upon the newer tendencies in municipal government, the commission form of government and the city-manager plan coming in for thoro analysis. *(Second semester; 3 hours.)*

POLITICAL SCIENCE II*a*.— *Comparative Government.*—A study of the constitutional structure and organization of the governments of the more important European countries. The object of the course is to enable the student to compare these governments, both in theory and in their practical workings, with each other and with our own. *(First semester; 3 hours.)*

POLITICAL SCIENCE II*b*.—*Principles of Political Science.*—A study of the origin, nature, and functions of the state and a critical examination of ancient, medieval, and modern political theories. *(Second semester; 2 hours.)*

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*Open only to advanced students.

POLITICAL SCIENCE III*a* and III*b*.—*Constitutional Law of the United States.*—Intended to familiarize the student with the leading principles of the American constitutional system. The course will deal principally with the Federal Constitution and with the decisions of the Supreme Court of the United States and will be found of special value to those students who contemplate advanced work in political science or who intend to enter upon the study of the law. *(3 hours.)*

POLITICAL SCIENCE IV*a* and IV*b**.—*International Law.*—The object of this course is to set forth the rules and principles of International Law as a positive system with a historical background of custom and convention. The attributes of sovereign states, and their rights and duties as members of the family of nations, in peace, in war, and in the relation of neutrality will receive adequate treatment. *(3 hours.)*

POLITICAL SCIENCE V*a and* V*b**.—*Political Theories.*—A comprehensive survey and discussion of the more important political theories. *(3 hours.)*

MATHEMATICS

Professor Simpson Mr. Hale

The work in the Department of Mathematics is planned with a threefold purpose in view:

1. For those who intend to *specialize* in Mathematics it provides the preparation for more advanced work. Several advanced courses are offered such students.

2. To those who need Mathematics as an *instrument* it offers opportunities to become familiar with this instrument. The application of Calculus not only to Physics, Chemistry, and Engineering, but even to such seemingly remote realms as Psychology and Political Economy, makes it advisable that this class should continue the study of Mathematics at least so far as to include Calculus.

3. To others it gives logical training in Analysis and Proof, introduces them to that scientific method par excellence of the Hypothesis, and develops the idea of a deductive system in its classical form.

MATHEMATICS A.—Solid Geometry. *(2 hours.)*

MATHEMATICS B.—Plane Trigonometry and Logarithms. *(2 hours.)*

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*Open only to advanced students.

MATHEMATICS I.—Plane Analytic Geometry and College Algebra. *(3 hours.)*

MATHEMATICS II.— Spherical Trigonometry and College Algebra. *(1 hour; not given in 1922-23.)*

MATHEMATICS III.— Differential and Integral Calculus. *(3 hours.)*

MATHEMATICS IV.—Solid Analytic Geometry and Calculus. *(2 hours.)*

MATHEMATICS V.— Advanced Calculus and Differential Equations. *(2 hours.)*

MATHEMATICS VI.—Theory of Equations, Complex Numbers, and Determinants. *(3 hours.)*

MATHEMATICS VII.— Modern Projective Geometry. *(2 hours.)*

MODERN LANGUAGES

Professor Crow

Instructor Weedon Mr. Duckworth

Extensive courses of reading, in and out of class, frequent exercises, oral and written, and studies in literature and language form the chief feature of instruction.

Authors and textbooks vary from year to year. Tho the classics are not neglected, special attention is paid to the literature of the Nineteenth Century.

All the courses offered will not be given in any one year.

FRENCH

FRENCH A.— *Elementary Course.*— Pronunciation, forms, elementary syntax, dictation, written exercises, memorizing of vocabularies and short poems, translation. *(3 hours.)*

FRENCH I.— *Intermediate Course.*—Work of elementary course continued, advanced grammar, including syntax, prose composition, translation of intermediate and advanced texts, sight reading, parallel. *(3 hours.)*

FRENCH II.—*Advanced Courses.*—Syntax, stylistic, composition, history of French literature, selections from the dramatists or novelists, as class may decide. *(3 hours.)*

FRENCH III.—*Romance Philology.*—*(Prerequisites: French II and Latin II; 3 hours.)*

SPANISH

SPANISH A.—*Elementary Course.*—Pronunciation, forms, elementary syntax, dictation, written exercises, memorizing of vocabularies and short poems, translation. *(3 hours.)*

SPANISH I.—*Intermediate Course.*—Work of elementary course continued, advanced grammar, including syntax, prose composition, translation, parallel. *(3 hours.)*

SPANISH II.—*Commercial Correspondence.*—*(Optional, subject to instructor's permission; 3 hours.)*

MUSIC

Mr. Brown

This department aims to foster a love for good music and to encourage students to use their musical abilities and training for the benefit of themselves and others. It trains and directs the student chorus, the chapel choir, the glee and mandolin and guitar clubs, the orchestra, and the University band, and offers private instruction in voice and in violin and other instruments. It seeks to cooperate with the musical organizations of Gainesville and in conjunction with them to give several public entertainments during the year.

Owing to the lack of funds for the department, a small tuition fee is charged for private instruction.

PHILOSOPHY

Professor Enwall

The primary aim of this department is to give the student a broad outlook upon life in general, as well as a better understanding of his own life from psychological, ethical, and metaphysical viewpoints. Philosophy lies nearer today than ever before to the various sciences, on the one hand, and to the demands of practical life on the other.

Another very important aim is to aid in the professional training of teachers. For description of the equipment for carrying on mental and physical tests, see page 26.

Students may begin with Course I*a*, II*a*, III*a* and IV*a*.

PHILOSOPHY I*a*.—*General Psychology.*—Facts and theories current in general psychological discussion: the sensations, the sense organs, and the functions of the brain; the higher mental functions—attention, perception, memory, feeling, emotion, volition, the self; and like topics. *(First semester; 3 hours.)*

PHILOSOPHY I*b*. — *Experimental Psychology.* — Mainly laboratory work with standard apparatus on the current problems in Experimental Psychology. Special attention given to methods of psychological investigation and the collection and treatment of data. *(Second semester; 3 hours; laboratory fee $2.00.)*

PHILOSOPHY II*a*.—*Logic, Inductive and Deductive.*—The use of syllogisms, inductive methods, logical analysis, and criticisms of fallacies. *(First semester; 3 hours.)*

PHILOSOPHY III*a*.—*Ethics.*—Principles of Ethics: study of such topics as goodness, happiness, virtue, duty, freedom, civilization, and progress; history of the various Ethical Systems. *(First semester; 3 hours.)*

PHILOSOPHY III*b*.—*Social Psychology.*—Influences of the social environment upon the mental and moral development of the individual. *(Second semester; 3 hours. Prerequisite Phil. Ia.)*

PHILOSOPHY IV*a*.—*History of Ancient Philosophy.*—The development of philosophic thought from its appearance among the Ionic Greeks to the time of Descartes. Special attention will be given to the philosophy of Plato and Aristotle. *(First semester; 3 hours.)*

PHILOSOPHY IV*b*.—*History of Modern Philosophy.*—A continuation of IV*a*. Special attention will be given to the works of Descartes, Spinoza, Leibnitz, Kant, Hume, etc. *(Second semester; 3 hours.)*

PHILOSOPHY V*a*.—*Advanced Psychology.*—The theoretical problems in the field of modern psychology; the practical aspects of psychology as applied to Business, Law, Medicine, Education, etc. *(First semester; 3 hours.)* Not offered 1922-23.

PHILOSOPHY V*b*.—*Abnormal Psychology.*—Abnormal phases of mental life: dreams, illusions, hallucinations, suggestions, hypnotism, hysteria, diseases of the memory, diseases of the will, etc. Special attention given to mental hygiene. *(Second semester; 3 hours.) (Open to Seniors and advanced premedical students only.)*

PHILOSOPHY VI.—*Advanced Logic.*—Theories of thought and knowledge. *(Prerequisite: Philosophy IIa, and IVb, Given with Philosophy VII in alternate years. Not offered 1922-23. 3 hours. Hours to be arranged. Seminar.)*

PHILOSOPHY VII.—*Philosophy of Nature.*—Man's relation to Nature; the various philosophical doctrines: Animism, Pantheism, Materialism, Realism, Agnosticism, Humanism, Idealism, etc. *(Prerequisite: Philosophy IIa, IVa, and IVb. Given with Philosophy VI in alternate years. Offered 1922-23. 3 hours. Hours to be arranged. Seminar.)*

DEPARTMENT OF ATHLETICS AND PHYSICAL EDUCATION*

Director Kline
Dierctor Manchester

This department has jurisdiction over all forms of athletics and gymnasium exercises. It is striving to accomplish three things.

One of these objectives is to advance inter-collegiate games and sports, and establish football, basketball, baseball, track, and tennis teams in a strong, friendly relationship with those of other large universities and colleges of the country. Rapid and sound development is noticeable in 1922, particularly, as evidenced by the baseball and football schedules and the entrance of Florida into the Southern Inter-Collegiate Conference, composed of the large institutions of the South. Any student carrying twelve hours' work satisfactorily, who has been one year in attendance at the University, is eligible to take part in these inter-collegiate contests. Adequate provision will be made for inter-collegiate freshmen teams and competition on the same basis as "Varsity" requirements. A thoro medical examination is required of every candidate for any of these teams. Observance of reasonable training rules is required under the Honor System. Good habits and a fine spirit are desired above all else and are considered indispensable in securing successful teamwork. Special courses will be given, if the demand warrants them, in football, baseball, basketball, and track with the object of fitting men for coaching service.

Another objective is to foster and develop, extensively, intra-mural games and sports and mass play. These activities are open for every student who cares to take part, and all are urged to participate. Inter-college and inter-class schedules are arranged and played in all branches of sports. Boxing, wrestling, swimming, hand ball, volley ball, soccer, indoor baseball and mass play are offered under expert instruction.

*See also Department of Hygiene, pages 163-164.

The third objective of this department is physical development solely. Gymnasium classes are called twice per week and the work is compulsory for freshmen and sophomores. College credit is given for this work. Inter-collegiate or intramural participation during the season is accepted in place of gymnasium work. This work consists of calisthenics and all forms of exercises that may be had in any well equipped gymnasium. This includes punching bags, trapeze, pulleys, rings, parallel bars, ropes, spring board and tumbling mats. Great emphasis is placed upon outdoor work in Florida's wonderful climate. No violent or dangerous exercises are permitted and careful expert instruction is available.

The department seeks the all-around development of the individual, physically, mentally and spiritually and bases its team play upon clean sportsmanship.

PHYSICS

Professor Benton — Assistant Professor Perry
Mr. Weil — Mr. Little

The work of this department is intended to meet the needs, on the one hand, of those who study physics as a part of a liberal education and, on the other hand, of those who will have to apply physics as one of the sciences fundamental to engineering, or to medicine.

The courses offered in this department fall into three groups; (1) Physics V is a brief course in general physics and does not pre-suppose any previous knowledge of physics; (2) Physics I, II and III form a longer and more advanced course in general physics, pre-supposing a knowledge of the physics taught in the High Schools and of Trigonometry; (3) the remaining courses deal more fully with special branches of physics, pre-supposing a college course in general physics, and some advanced mathematics.

Instruction is given by (1) recitations based upon lessons assigned in textbooks; (2) laboratory work, in which the student uses his own direct observation to gain knowledge of the subject; (3) lectures, in which experimental demonstrations of the principles under discussion are given; and (4) seminar work in the advanced courses, in which the various members of the class take up special problems requiring extended study or investigation and report upon them.

The physical laboratory (see page 25) is well equipt for the experiments usually required in undergraduate laboratory work in the best colleges.

PHYSICS I.—General physics, including mechanics, heat, acoustics, and optics, but not electricity and magnetism. *(1 lecture and 2 recitations per week; Prerequisites: High School Physics and Plane Trigonometry.)*

PHYSICS II.—General laboratory physics, to accompany Physics I. *(2 exercises of 2 hours each per week; laboratory fee $1.50 for each semester.)*

PHYSICS III.—General electricity and magnetism, being a continuation of Physics I. *(2 recitations and one 2-hour laboratory exercise per week; laboratory fee $1.50 for each semester.)*

PHYSICS V.—General physics designed to meet the needs of the general student, and of those taking the Pre-Medical Course; divided as follows:

PHYSICS V*a*.—Mechanics and Heat. *(First Semester; 3 recitations and two 2-hour periods per week; laboratory fee $1.50.)*

PHYSICS V*b*.—Sound, Light, Electricity and Magnetism. *(Second Semester; 3 recitations and two 2-hour laboratory periods per week; laboratory fee $1.50.)*

METEOROLOGY.—A brief general course. *(First Semester; 2 recitations and one 2-hour laboratory period per week; Prerequisites: Physics V or Physics I and II.)*

ASTRONOMY.—A brief general course on descriptive astronomy. *(Second Semester; 2 recitations and one 2-hour period of observation per week; Prerequisites: Physics V or Physics I and II.)*

THEORETICAL MECHANICS.—A course in theoretical mechanics covering topics which do not enter the course in mechanics offered in the Mechanical Engineering Department; such as theory of attractions, potential, and vector analysis. *(First Semester; 3 recitations or lectures per week; Prerequisites: Mathematics III, and Physics V or Physics I, II and III.)*

MATHEMATICAL PHYSICS.—An introductory course to general mathematical physics. *(Second Semester; 3 recitations or lectures per week; Prerequisites: Mathematics III, and Physics V or Physics I, II and III.)*

ADVANCED EXPERIMENTAL PHYSICS.—*(1 class period and 4 hours of laboratory per week; Prerequisites: Mathematics I, and Physics V or Physics I, II and III.)* Omitted in 1922 to 1923.

THEORY OF HEAT.—*(2 hours class and 2 hours laboratory per week.)* Omitted in 1922 to 1923.

THEORY OF OPTICS.—*(2 hours class and 2 hours laboratory per week.)* Omitted in 1922 to 1923.

THEORY OF ELECTRICITY AND MAGNETISM.—Mathematical theory, covering such topics as electric and magnetic fields, electric oscillations and electron theory. *(3 hours per week of lectures or recitations.)* Omitted in 1922-23.

SOCIOLOGY AND ECONOMICS

Professor Bristol

The aims of this department are to equip the student for an intelligent appreciation of and participation in discussions of social and economic problems; to make for more efficient citizenship; to provide the sociological training so essential for those preparing for law, teaching, the ministry, or professional social work, and to assist so far as possible in the special training needed by those looking forward to a business career.

SOCIOLOGY

Sociology A forms a general introduction to all courses given in the department.

SOCIOLOGY A.—*Introduction to the Mental and Social Sciences.*—A course of lectures by Professors Benton, Leigh, Rogers, Enwall and Bristol, with required readings and discussions. *(First semester; 3 hours.)*

SOCIOLOGY I.—*Introduction to Sociology.*—The principles of social evolution, social organization and social control; the factors that make for social efficiency and social progress; social pathology. Not open to Freshmen without special permission. Sociology A should precede. *(First and second semesters; 3 hours.)*

SOCIOLOGY III*b*.—*Rural Sociology.*—A broad survey of the field of rural life in its social aspects; methods of improvement. *(Second semester; 3 hours.)*

SOCIOLOGY IV*a*.—*General Sociology.*—A critical study of social forces, processes and products; principles underlying social organization and social progress. *(Elective for Juniors and Seniors. First semester; 3 hours.)* Omitted in 1922-23.

SOCIOLOGY IV*b*.— *Race Problems.*— History, causes and effects of immigration; methods of assimilation. The negro problem. *(Prerequisites: one course in Sociology. Second semester; 3 hours.)* Omitted in 1922-23.

SOCIOLOGY VII.—*Seminar.—(Primarily for Seniors and graduates; 2 hours.)*

ECONOMICS

Economics B should precede all other courses except Economics VI*a*.

Economics I or VI*a* should precede all other courses except Economics B.

ECONOMICS B.—*Our Economic Organization.*—The development and structure of our present industrial system; the various factors in production; exchange; problems of business organization and management; the conservation of natural and human resources. *(Second semester; 3 hours.)*

ECONOMICS I.—*Principles of Economics.*—A general course covering the fundamental principles of consumption, production, exchange and distribution of wealth with practical application to concrete problems. Not open to Freshmen and should be preceded by Sociology A and Economics B. *(First and second semesters; 3 hours.)*

ECONOMICS II*a*.—*Money and Banking.*—The nature and functions of money; functions and principles of banking as revealed in the banking systems of leading countries. *(First semester; 3 hours.)* Omitted in 1922-23.

ECONOMICS II*b*.—*Corporation Finance.*—Rise, growth and development of large business organizations; corporations, trusts, pools, and holding companies; financial and social problems involved. *(Second semester; 3 hours.)* Omitted in 1922-23.

ECONOMICS III*a*.—*Public Finance.*—Principles governing expenditures of modern governments; sources of revenue; public credit; principles and methods of taxation and of financial administration as revealed in the fiscal systems of leading countries. *(Second semester; 3 hours.)*

ECONOMICS III*b*.—*Transportation.*—Nature, history and problems of railway transportation, especially in the United States; rates, discrimination; government regulation, control and ownership. *(Second semester; 3 hours.)* Omitted in 1922-23.

ECONOMICS IV*a*.—*Labor Problems.*—Origin and nature; methods of amelioration and reform; woman and child labor, sweating, unemployment, labor legislation; co-operation, profit sharing, insurance, industrial education. *(First semester; 3 hours.)*

ECONOMICS IV*b*.—*Economic History of the United States.* —A general but comprehensive history of the growth of American industry and commerce with the social and economic problems involved. *(Second semester; 3 hours.)* Omitted in 1922-23.

ECONOMICS VI*a*.— *Introduction to Economics.*— A brief study of the principles of economics and their application to practical problems. *(Primarily for agricultural and engineering Juniors; first semester; 3 hours.)*

ECONOMICS VI*b*.— *Business Organization and Management.*—Principles of business organization; types of organization; manufacturing plants and equipment; cost accounting; buying, selling, advertising; welfare work. *(Second semester; 3 hours.)*

BUSINESS LAW.—The following courses in the College of Law are especially valuable for those planning to enter business. They may be taken by students in the College of Liberal Arts with the consent of the Dean, though preferably not before the Junior year. The figures in parenthesis indicate the number of semester hours credit. First semester: Contracts (4), Insurance (1), Public Service Corporations (2), Partnership (2), Damages (2), Mortgages (2). Second semester: Contracts (3), Sales (1), Private Corporations (4), Negotiable Instruments (2), Suretyship (2).

HUMAN ENGINEERING.—This course, given in the College of Engineering, is especially commended to students preparing for business. *(First semester; 2 hours.)*

COLLEGE OF AGRICULTURE

WILMON NEWELL, *Dean*

GENERAL STATEMENT

The College of Agriculture has three divisions:

1. Instructional Division (the College proper).
2. Research Division (Experiment Station).
3. Agricultural Extension Division.

THE COLLEGE

FACULTY.—Wilmon Newell, L. W. Amis, J. H. Atkinson, F. H. Bain, E. C. Beck, A. P. Black, R. W. Blacklock, L. M. Bristol, H. G. Clayton, M. D. Cody, J. W. Day, J. M. Farr, W. L. Floyd, W. R. Hale, E. W. Jenkins, E. L. Lord, T. R. Leigh, J. M. Leake, J. S. Rogers, F. Rogers, I. E. Ryder, K. T. Steik, N. W. Sanborn, A. L. Healy, T. M. Simpson, A. P. Spencer, Ralph Stoutamire, A. W. Sweet, J. E. Turlington, J. A. Van Fleet, C. H. Willoughby.

Special Lecturers for 1921-1922.

Dr. E. W. Berger, *Entomologist, State Plant Board.*
R. C. Blake, *Poultry Specialist.*
Dr. J. V. Knapp, *State Veterinarian.*
Miss Minnie Floyd, *Specialist in Home Poultry Work.*
W. C. Funk, *Office of Farm Management, U. S. Dept. Agri.*
Prof. H. Harold Hume, *President State Horticultural Society.*
Harold Irving, *Poultryman.*
S. T. Fleming, *Bureau of Crop Estimates, U. S. Dept. Agri.*
Hon. W. A. McRae, *Commissioner of Agriculture.*
Dr. J. H. Montgomery, *Quarantine Inspector, State Plant Board.*
F. M. O'Byrne, *Nursery Inspector, State Plant Board.*
Capt. R. E. Rose, *State Chemist.*
Frank Stirling, *General Inspector, State Plant Board.*
Willard F. Sanborn, *Poultryman.*

Special lectures are given also by members of the Experiment Station and Agricultural Extension Staffs.

AIM AND SCOPE.—The College was established under the Acts of Congress creating and endowing institutions for the liberal and practical education of the industrial classes. Recognition of agriculture as a branch of collegiate instruction is a distinctive feature of schools thus founded.

The aim of the College is to afford young men the best possible opportunity for gaining technical knowledge and training in the art and science of agriculture. About one-third of the student's time is devoted to technical studies, the other two-thirds to cultural studies and basic sciences. A foundation is thus laid which will enable graduates to become leaders in educational work or effective producing agriculturists.

EQUIPMENT.—*Agricultural Hall* provides space for offices and classrooms and laboratories for the departments of agronomy, animal husbandry and dairying, agricultural engineering, poultry, veterinary science, and horticulture.

Libraries.—Many works on agriculture and horticulture have recently been added to the general library. A trained librarian aids students in finding needed references. Each department has, furthermore, a small collection of well-selected volumes, which are always accessible. The Experiment Station library contains a very complete set of bulletins from the experiment stations of the world and from the U. S. Department of Agriculture, all fully indexed and carefully filed.

Farms.—The College farm, used for instruction and for growing crops with which to feed the instruction herds, consists of 225 acres: 10 acres for trucking, 100 acres for pasture and field crops, 5 acres for orchard, 15 acres for soiling purposes and stock lots, and 5 acres for buildings and grounds. The equipment includes a hay and storage barn, a sweet-potato storage house, a farm-foreman's house, a dairy barn, a machinery shed and corn crib, a potting house, poultry houses and yards, and several irrigation systems. The Experiment Station farm and farm buildings are easily accessible.

AGRONOMY DEPARTMENT

The *Agronomy Department* occupies four rooms—a large, well-lighted and equipt soil laboratory, with adjoining storage and work room, an office, and a classroom.

The soil laboratory is equipt with microscopes, sampling augurs, tubes, and carriers; balances, ovens, soil thermome-

ters, packers, cylinders, and tubes; moisture absorption box with trays; percolation, capillary, and evaporation apparatus; sieves, shaker, etc. There are three large stone-top desks, with individual lockers for seventy-two students. The storage room is provided with soil bins, packer, cases, and shelving in abundance.

For *Agricultural Engineering* work there are two laboratories—the one for farm motors and iron work, the other for farm machinery. They are equipt with gasoline engines, feed grinders, stalk cutter, walking and riding plows, various types of harrows, walking and riding cultivators, seeders, surveying implements, several of the best types of power sprayers and farm tractors, a farm lighting-system, etc. Stress is laid upon instruction in farm machinery, because labor-saving appliances have not yet come into general use in Florida.

HORTICULTURAL DEPARTMENT

The *Horticultural Department* has a large, well-furnished lecture-room, a laboratory equipt with microscopes, wall-cases for preserved specimens, and a storeroom for material and supplies. In addition to these, provision is made for practical work outdoors. A propagating house and a nursery on the farm are used in carrying on stratification, layerage, cuttage, budding, grafting, and other methods of plant propagation; trees of different kinds are growing in the orchard; hot beds and cold frames are provided for starting young plants; an irrigation plant has been installed with Skinner, Campbell, Skinner-Stephens, Florida Favorite, and modified Skinner sprinkling devices and a surface furrow system; and other facilities for growing fruits and vegetables.

ANIMAL HUSBANDRY DEPARTMENT

The *Animal Husbandry Department* is provided with a lecture-room containing seats for eighty students and concrete floor upon which to exhibit animals. The equipment includes scales, measuring apparatus and a large assortment of lantern slides representing the various breeds. In the dairy barn a stock-judging arena, 30x40 feet, has been provided for practice in scoring animals.

For work in *Dairying* the College has a large, well-lighted laboratory, equipt with several makes of hand-power cream separators, churns, and butter workers; milk coolers, gravity

creamer, vats for cream ripening and cheese making; scales, wash sinks, sterilizer, and minor apparatus.

The milk-testing laboratory contains working desks and machinery for all modern tests of dairy products. The equipment includes Babcock testers of different sizes, cream scales, lactometers, acidmeters, butter-moisture tests, and the necessary glassware, reagents, etc.

The *Barns* and *Livestock* include: A barn for the horses and mules used on the farm and campus; a large dairy barn of modern sanitary construction, provided with concrete floors and silos, steel stanchions and fittings, for the herd of high-grade Holsteins and registered Jerseys belonging to the Experiment Station; representative animals of the Shorthorn and Aberdeen Angus breeds; pens and grazing-yards with modern shelters and equipment, containing breeding herds of Berkshire, Poland China, Duroc Jersey, Tamworth, and Chester White hogs. Other breeds and classes of animals are being added from year to year. A concrete dipping-vat, built in cooperation with the Florida State Board of Health, is used for demonstrations of cattle-tick eradication.

The *County and State Fairs of Florida* provide excellent practice each year in showing and judging animals. Students are encouraged to take part in judging contests and to aid in show-ring work. The Southeastern Fair, Atlanta, Ga., offers prizes and medals to competing teams from southern agricultural colleges. The Alachua County Fair, at Gainesville, Florida State Fair, at Jacksonville, and the South Florida State Fair at Tampa offer cash prizes and diplomas to students making the best records in stock judging. Several large herds of cattle and hogs within a few miles of the University, in Alachua and Marion counties, are available for inspection and judging purposes. The meat-packing houses and dairy plants of Jacksonville and vicinity are freely offered for study, and trips for this purpose under the guidance of instructors are arranged annually.

POULTRY DEPARTMENT

The poultry department is provided with an office, storeroom, laboratory, three laying houses, incubator house, brooder house, central poultry house 16 x 24, with two wings 8 x 16. The central house will be used for class purposes, practice

shows, demonstrations; the wings providing accommodations for special matings and trapnesting high record poultry.

The plant is well provided with oil and electric heated incubators of various makes; oil, coal and electric heated brooders; poultry house equipment of various styles of trapnests, feed and water appliances; small coops and houses.

The poultry plant has splendid flocks of four breeds—Leghorn, Wyandotte, Plymouth Rock, Rhode Island Red—owning flocks that are well bred for egg production and from lines of standardbred ancestry. These are represented by Single Comb White Leghorns, Buff Wyandottes, Barred Plymouth Rocks, Single Comb Rhode Island Reds. There are Leghorns with trapnest records up to 250 eggs, Wyandottes up to 218 eggs, and the Leghorn cock that heads one of the pens carries six years of known line breeding along egg lines—214 to 279 eggs —and is a direct descendant of blue ribbon winners at New York and Boston.

This teaching poultry plant has grown from just a few incubators and brooders, to its present modest size in thirty months. It will be used for illustration, for practice work, that the men who leave the College may be better fitted to handle a large flock of hens on the average farm, or to take up poultry husbandry as a business.

Local, county and state poultry shows are made use of in the work, and the annual ten-day course in poultry provides opportunity to hear men and women who are succeeding in actual poultry farming. Poultry courses are given only during the second semester.

VETERINARY DEPARTMENT

The *Veterinary Department* is provided with a lecture-room, with seats for eighty students. An operating room has recently been constructed and is equipt with an equine operating table, cabinets containing various medicines and surgical instruments. The laboratory is supplied with microscopes for the study of normal and diseased tissue specimens. The equipment includes also mounted skeletons of the horse and ox, an assortment of charts, models of the organs of the various farm animals, preserved specimens of diseased organs and of parasites, and a good library.

THE AGRICULTURAL CLUB.—This is a voluntary association of students of the College. Its purpose is to give training

in public speaking and in preparation for leadership. The programs consist mainly of speeches, essays, and of debates on agricultural or civic topics.

SCHOLARSHIPS.—*County Scholarships.*—Provision has been made by Legislative act for a scholarship, sufficient to pay the board of a student in the College of Agriculture, from each county, to be provided for at their discretion by the various Boards of County Commissioners. The recipient is to be selected by competitive examination from among the qualified applicants.

Whether such a scholarship has been provided for may be learned from the Clerk of the Board of Commissioners or the Demonstration Agent of the county in question. Other information regarding it may be obtained from the College of Agriculture.

Boys' Clubs Scholarships.—The Florida Bankers' Association offers club boys three prize scholarships, of $100 each, in the College of Agriculture: one for the Western, one for the Central, and one for the Southern district.

Williamson and Dennis, of Jacksonville, offer two first-prize scholarships, of $250 each, in the College of Agriculture: one to the State Pig Club Champion, the other to the State Beef-Calf-Club Champion.

LOAN FUNDS.—*William Wilson Finley Foundation.*—As a memorial to the late President Finley and in recognition of his interest in agricultural education, the Southern Railway Company has donated to the University the sum of one thousand dollars ($1,000), to be used as a loan fund. No loan from this fund to an individual is to exceed $150 per year. Recipients are selected by the Dean of the College of Agriculture, to whom all applications should be directed.

Loan funds available for students in any college of the University, as well as the conditions under which loans are made, will be found described on page 39.

REMUNERATIVE AND INSTRUCTIVE LABOR.— Opportunities frequently occur for students to work in the fields and truck gardens, about the barns, in the buildings, and at the Agricultural Experiment Station. Those who, during vacation periods, engage in agricultural pursuits will be markedly benefited and after graduation will command more desirable

positions or find their efforts on the farm more effective. (See also Opportunities for Earning Expenses, page 37.)

Donations and Loans.—The laboratories have been supplied with much of their farm machinery for instructional purposes thru the generosity of the following manufacturers and distributors:

Stover Manufacturing Company, Freeport, Ill.
Florida Agricultural Supply Co., Jacksonville, Fla.
Oliver Chilled Plow Company, South Bend, Ind.
Alamo Farm Lighting Plant, Holt Electric Co., Jacksonville, Fla.
Skinner Machinery Co., Dunedin, Fla.
Hardie Spraying Machine, Gulf Fertilizer Co., Tampa, Fla.
Hercules Engine Company.
Ford Motor Company, Jacksonville, Fla.
Owensboro Ditcher Co., Owensboro, Ky.
Niagara Sprayer Co., Middleport, N. Y.

COURSES.—The following courses are offered:

1. A Four-Year Course.
2. A One-Year Course.
3. Two Four-Month Courses.

FOUR-YEAR COURSE

ENTRANCE REQUIREMENTS.—See pages 42 to 46.

GROUPS.—The group courses offered afford the individual student opportunity for preparing for that branch of agriculture in which he is most interested. The Agronomy Group should be selected by those wishing to pursue general farming; the Animal Husbandry Group by those interested in fruit growing or truck farming; and the Agricultural-Chemical Group by those desiring to become analysts.

No student will be allowed to take more than twenty hours of work, unless his general average during the previous year was at least 87, with no failure in any study; or more than twenty-two hours, unless the previous year's average was at least 90, with no failure.

CREDITS FOR PRACTICAL WORK.—Students who, by previous arrangement with the head of a department and the Dean, do practical work, during their course of study, in any recognized agricultural pursuit, and who render competent and faithful service, will, on returning to College and presenting a satisfactory written report, be entitled to one semester-hour credit for each month of such work. Such credit shall not total more than six semester-hours in the Two-Year and Four-Year courses.

FARM EXPERIENCE REQUIRED.—At least three months of practical work is required before graduation, but credit for this will be given only as stated above.

DEGREE.—The work outlined in the following tables, whatever the major subject, leads to the degree of Bachelor of Science in Agriculture (B.S.A.).

CURRICULUM

Leading to the Degree of Bachelor of Science in Agriculture

FOR ALL GROUPS

Freshman Year

NAMES OF COURSES	NATURE OF WORK	*HOURS PER WEEK	
Agricultural Engineering I	Farm Machinery and Motors	3	0
Agronomy I*b*	Farm Crops	0	3
Animal Husbandry I	Types and Breeds of Animals	0	3
Biology I	General Biology	4	0
Biology II	General Botany	0	4
English I	Advanced College Rhetoric	3	3
Horticulture I*a*	Plant Propagation	3	0
Mathematics B	Plane Trigonometry	2	2
Military Science I		3	3
Physical Education		1	1
		19	19

Sophomore Year

Agronomy II*a*	Soils	3	0
Agronomy III*a*	Forage Crops	3	0
Biology VI	Economic Zoology	3	3
Chemistry I	General Chemistry	5	5
Horticulture I*b*	Pruning	0	3
Horticulture II or Animal Husbandry II & III	Trucking Animal Feeding and Breeding	2	2
Military Science II		3	3
Veterinary Science I or Poultry Husbandry I or Elective	Veterinary Elements Farm Poultry	0	3
Physical Education		1	1
		20	20

*The first column gives the hours per week for the first semester, the second column the hours per week for the second semester.

AGRONOMY GROUP

Junior Year

Names of Courses	Nature of Work	*Hours per Week	
Agronomy IV	Fertilizers	0	3
Biology IX	Plant Physiology	3	0
Biology XI	General Bacteriology	4	0
Biology XII	Agricultural Bacteriology	0	3
Chemistry IV*a*	Organic Chemistry	5	0
Chemistry IV*b*	Agricultural Chemistry	0	5
Economics VI*a*	Introduction to Economics	3	0
Sociology III*b*	Rural Sociology	0	3
Elective		2	3
		17	17

Senior Year

Agricultural Engineering III	Irrigation and Drainage	3	0
Agronomy V	Soil Technology	3	0
Agronomy VI-VII	Farm Management	3	3
Biology X	Plant Pathology	0	3
Horticulture IX	Landscape Gardening	0	2
Elective		7	3
		16	16

ANIMAL HUSBANDRY GROUP

Junior Year

Names of Courses	Nature of Work	*Hours per Week	
Animal Husbandry IV	Beef Production	2	0
Animal Husbandry V	Swine Production	0	2
Biology XI	General Bacteriology	4	0
Biology XII	Agricultural Bacteriology	0	3
Dairying I	Dairy Products	3	0
Dairying II	Dairy Farming	0	3
Poultry Husbandry II	Incubation and Brooding	0	3
Veterinary Science II	Veterinary Anatomy & Physiology	3	3
Elective		5	3
		17	17

Senior Year

Agronomy VI-VII	Farm Management	3	3
Agricultural Engineering III	Irrigation and Drainage	3	0
Economics VI*a*	Introduction to Economics	3	0
Sociology III*b*	Rural Sociology	0	3
Poultry Husbandry III	Poultry Management	0	2
Veterinary Science III	Diseases of Farm Animals	3	3
Elective		4	5
		16	16

*The first column gives the hours per week for the first semester, the second column the hours per week for the second semester.

HORTICULTURAL GROUP

Junior Year

Names of Courses	Nature of Work	*Hours per Week	
Agronomy IV	Fertilizers	0	3
Biology IX	Plant Physiology	3	0
Biology XI	General Bacteriology	4	0
Biology XII	Agricultural Bacteriology	0	3
Horticulture IV	Citrus Culture	3	0
Horticulture V	Citrus Harvesting, Marketing and Judging	0	3
Horticulture VII*a*	Deciduous	3	0
Horticulture VII*b*	Subtropical Fruits	0	3
Economics VI*a*	Introduction to Economics	3	0
Sociology III*b*	Rural Sociology	0	3
Elective		1	2
		17	17

Senior Year

Agronomy V	Soil Technology	3	0
Agronomy VI, VII	Farm Management	3	3
Biology X	Plant Pathology	0	3
Horticulture VIII	Plant Breeding	0	3
Horticulture IX	Landscape Gardening	0	2
Horticulture VI or Horticulture X	Insects and Diseases of Citrus Fruits / General Forestry	3	0
Elective		7	5
		16	16

AGRICULTURAL-CHEMICAL GROUP

Junior Year

Names of Courses	Nature of Work	*Hours per Week	
Agronomy IV	Fertilizers	0	3
Biology XI	General Bacteriology	4	0
Biology XII	Agricultural Bacteriology	0	3
Chemistry III	Qualitative Analysis	3	3
Chemistry IV*a*	Organic Chemistry	5	0
Chemistry IV*b*	Agricultural Chemistry	0	5
Elective		5	3
		17	17

Senior Year

Chemistry VII	Quantitative Analysis	3	3
Chemistry IX	Chemistry of Soils, Fertilizers, etc.	0	3
Chemistry XI	Physical Chemistry	3	3
Economics VI*a*	Introduction to Economics	3	0
Sociology III*b*	Rural Sociology	0	3
Elective		7	4
		16	16

*The first column gives the hours per week for the first semester, the second column the hours per week for the second semester.

Students desiring to secure the degree B.S.A. and at the same time qualify to teach in the Smith-Hughes Schools may do so by electing the following group after completing the work of the Sophomore year:

Junior Year

Names of Courses	Nature of Work	Hours per Week	
Agronomy IV	Fertilizers	0	3
Biology XI	General Bacteriology	4	0
Biology XII	Agricultural Bacteriology	0	3
Education IX	Vocational Education	3	0
Education IV	Psychology of Education	0	3
Education VIII	Methods of Teaching Vocational Agriculture	3	3
Elective in Agriculture		7	5
		17	17

Senior Year

Agronomy V	Soil Technology	3	0
Agronomy VI & VII	Farm Management	3	3
Education V	Principles of Education	0	3
Education XVI	Supervised Teaching of Vocational Agriculture	3	3
Vocational Shop Work		3	3
Elective in Agriculture		4	4
		16	16

DEPARTMENTS OF INSTRUCTION

AGRONOMY AND AGRICULTURAL ENGINEERING

Professor Turlington Assistant Professor Rogers

AGRONOMY

The laboratory work and field observation aim to fix the principles learned in the classroom and to give them practical application.

AGRONOMY A.—*Elements of Agronomy.*—The soil as related to plant growth and the principles governing the production of the field and forage crops of Florida. *(Short Courses, Vocational and Practice High School; 3 hours; laboratory fee $1.00 for each semester.)*

AGRONOMY B*b*.—*Fertilizers.*—An elementary study of fertilizers, their nature and reaction on the soil and crop; fertilizer formulas and home mixing. A thoroly practical course, dealing with Florida conditions. *(Short Courses, Vocational and Practice High School; 3 hours.)*

AGRONOMY C*b*.—*Farm Management.*—An elementary course in organization for the farm business as a unit. The laying out of fields, location of buildings, farm accounting and important factors affecting profits will be considered. *(Short Courses, Vocational and Practice High School; 3 hours.)*

AGRONOMY I*b*.—*Farm Crops.*—The various grain, fiber, and sugar crops with respect to their habits of growth, soil adaptations, fertilizer requirements, general methods of tillage and harvesting, and the most profitable forms in which to market them. Special attention will be given to corn, cotton, and sugar cane. *(Freshman year; class 2 hours, laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

AGRONOMY II*a*—*Soils.*—The origin, formation, and classification of soils; general methods of soil management and the adaptation of soils to the requirements of plants. *(Sophomore year; class 2 hours, laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

AGRONOMY III*a*.—*Forage Crops; Legumes, Grasses, etc.*—Legumes, grasses, and miscellaneous forage plants, and their adaptability to the various Florida soils, seeding and cultural methods, harvesting and storing, composition and use, illus-

trated by specimens brought before the students and by field observations. *(Sophomore year; 3 hours; laboratory fee $1.00.)*

AGRONOMY IV*b*.—*Fertilizers.*—The nature, composition, and sources of fertilizers and their reaction on soils and crops. Fertilizer formulas and home-mixing. The making and economical use of farm manures. Fertilizer requirements for various crops, etc. *(Junior year; 3 hours.)*

AGRONOMY V*b*.—*Soil Technology.*—The physical, chemical, and biological properties of soil as related to soil fertility and crop production; soil management and drainage. *(Junior or Senior year; recitations 2 hours, laboratory 2 hours; credit 3 hours; laboratory fee $2.50.)*

AGRONOMY VI*a*.—*Farm Management.*—The factors of production; systems of farming, their distribution and adaptation; farm accounts; problems of labor, machinery, storing, marketing, laying out farms, rotation systems. *(Senior year; 3 hours.)*

AGRONOMY VII*b*. — *Advanced Course in Farm Management.*—Special stress given to laying out and locating various buildings, lots, fields, and crops; cropping systems; surveys made in other states. *(Senior year; 3 hours.)*

AGRONOMY VIII*b*.— *Soil Management.*— Factors in crop production, loss of plant food, methods and results obtained by investigators; laboratory and field experiments. *(Elective for Seniors; 3 hours.)*

AGRONOMY IX*b*.—*Rural Law.*—Classification of property, boundaries, fences, stock laws, rents, contracts, deeds, abstracts, mortgages, taxes, laws governing shipping, etc. *(Elective, Junior or Senior year; 2 hours.)*

AGRONOMY X*a* or *b*.—*Special Courses.*—Special Courses will be offered at the option of the instructors, on approval of the Dean.

AGRICULTURAL ENGINEERING

Assistant Professor Rogers

AGRICULTURAL ENGINEERING A*b*.—*Farm Machinery.*—Care, construction, operation and selection of farm machinery. *(Short Courses, Vocational Students, class 1 hour, laboratory 4 hours; laboratory fee $1.00.)*

AGRICULTURAL ENGINEERING I*a*.—*Farm Machinery.*—The construction, selection, and operation of seeding, tilling, and

harvesting machinery. *(Freshman year; recitations 1 hour, laboratory 4 hours; laboratory fee $1.00.)*

AGRICULTURAL ENGINEERING II*b*.— *Farm Motors.*— The sources of power on the farm: windmill, gasoline and kerosene engines; special attention given to farm tractors. *(Junior or Senior year; recitations 2 hours, laboratory 2 hours; laboratory fee $3.00.)*

AGRICULTURAL ENGINEERING III*a*.—*Drainage and Irrigation.*—Farm surveying, drainage and irrigation systems; practice in making surveys and in designing systems. *(Senior year; recitations 2 hours, laboratory 2 hours; laboratory fee $2.00.)*

AGRICULTURAL ENGINEERING IV*a*.—*Farm Buildings.*— Ventilation, sanitation, construction, cost, management, laboratory work in designing and drawing plans. *(Junior or Senior year; recitations 2 hours, laboratory 2 hours; laboratory fee $2.00.)*

AGRICULTURAL EDUCATION

Professor Turlington Miss Miltimore

AGRICULTURAL EDUCATION I*a*.— *Library Work.*— Instruction in use of card catalog, readers' guides, agricultural indexes, and reference books; practice in collecting and making notes on assigned subjects. *(1 hour.)*

AGRICULTURAL EDUCATION II*b*.— *Agricultural Organizations.*—The organization and proceedings of agricultural societies. *(Freshman year; 1 hour.)*

ANIMAL HUSBANDRY AND DAIRYING

Professor Willoughby

ANIMAL HUSBANDRY

The livestock industry holds an important place in Florida, as it commands a steady income and is a valuable aid in maintaining soil fertility. The basic principles taught in the College are applicable to all parts of America, altho special instruction is given for Florida conditions.

ANIMAL HUSBANDRY A*a*.—*Elements of Animal Husbandry.* —History, types and breeds of farm animals, with elementary principles of breeding and selection. *(Short Courses, Vocational, and Practice High School; 3 hours.)*

ANIMAL HUSBANDRY B*b*.—*Live Stock Feeding and Management.*—Relation of soils, plants and animals; methods of feeding and handling different classes of farm animals. *(Short Courses, Vocational, and Practice High School; 3 hours.)*

ANIMAL HUSBANDRY I*b*.—*Types and Breeds of Animals.*—Types and classes of farm animals; leading breeds of horses, mules, cattle, sheep, and swine; practice in score-card and comparative judging. Animals owned by the College will be studied, and occasional trips made to nearby stock farms and stables. *(Freshman year; 3 hours.)*

ANIMAL HUSBANDRY II*a*.—*Animal Feeding.*—Composition of plants and animals; digestion and assimilation; feeding standards and balanced rations. Feeding methods for different classes of animals. *(Sophomore year; 2 hours.)*

ANIMAL HUSBANDRY III*b*.—*Animal Breeding.*—Principles underlying the breeding of animals, including heredity, variation, selection, environment; foundation and management of a breeding business. *(Sophomore year; 2 hours.)*

ANIMAL HUSBANDRY IV*a*.— *Beef Production.*— Practical methods in beef production: selection, feeding, and management of beef cattle; finishing and marketing; slaughtering and packing. Consideration of same subjects in mutton production. *(Sophomore or Junior year; 2 hours.)*

ANIMAL HUSBANDRY V*b*.— *Swine Production.*— Location and equipment of a hog farm, breeds of swine suited to the South; growing feeds for grazing and fattening; feeding and managing the herd; marketing and slaughtering, curing meats on the farm. *(Sophomore or Junior year; 2 hours.)*

ANIMAL HUSBANDRY VI*a*.— *Animal Conformation.*— Detailed study and measurement of market types and classes of animals; advanced stock-judging and show-ring practice at county and state fairs. *(Elective; 2 hours.)*

ANIMAL HUSBANDRY VII.—*Breeding History and Seminar.*—Advanced work in history of breeds, pedigrees and registration methods; historical review of the livestock industry and its relation to agriculture. *(Elective; 3 hours.)*

ANIMAL HUSBANDRY VIII*b*.—*Animal Nutrition.*— Review of latest books on nutrition of animals, by Armsby, Henry, Kellner, and others. *(Elective; 2 hours.)*

DAIRYING

DAIRYING I*a*.—*Dairy Products.*— Secretion, composition, properties of milk; testing milk and its products; methods of creaming; use of cream separators; manufacturing butter, cheese, etc. *(Sophomore or Junior year; 3 hours; laboratory fee $2.00.)*

DAIRYING II*b*.—*Dairy Farming.*— Locations suitable for dairy farming; construction of sanitary barns, dairy houses, silos; selection of breeds, feeding and management of herd, testing and herd records; pastures, soiling crops, silage; marketing products. *(Sophomore or Junior year; 3 hours.)*

DAIRYING III*b*.—*Milk Inspection.*—Methods of producing sanitary milk, operation of county and city milk plants; state and municipal dairy laws; work of city milk inspector, score-card practice with dairy herds and milk depots. *(Elective; 3 hours; laboratory fee $1.00.)*

DAIRYING IV.—*Dairy Manufactures.*—Advanced work in making butter, cottage and Cheddar cheese, fermented milks, ice-cream and other market products; creamery management and accounting. *(Elective; 2 hours.)* Omitted in 1922-1923.

POULTRY HUSBANDRY

Professor Sanborn

POULTRY HUSBANDRY A*b*. — *Farm Poultry.* — Value of poultry industry, the leading types and breeds of poultry, location and construction of poultry houses, feeding and management for egg and meat production, rearing of chicks on the farm. *(Vocational and Short Courses; class 2 hours, laboratory 2 hours; laboratory fee $1.00.)*

POULTRY HUSBANDRY I*b*. — *Farm Poultry.* — Value of poultry industry, the leading types and breeds of poultry, location and construction of poultry houses, feeding and management for egg and meat production, rearing of chicks on the farm. *(For groups other than Animal Husbandry; Sophomore year; class 2 hours; laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

POULTRY HUSBANDRY II*b*.— *Incubation and Brooding.*— Natural and artificial incubation, development of chick in the egg, artificial brooding and natural raising of chicks, feeding and management to feathering stage; use of modern apparatus and appliances of different sizes and types. *(Sophomore or*

Junior year; class 2 hours, laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)

POULTRY HUSBANDRY III*b*.—*Poultry Management.*—Feeding for growth, egg and meat production; management and care of the flock, keeping records and accounts, marketing and storing products, disinfection and treatment of diseases and parasites. *(Sophomore or Junior year; 2 hours; laboratory fee $1.00.)*

POULTRY HUSBANDRY IV*b*.—*Poultry Breeding and Judging.*—Principles underlying the handling of breeding pens and flocks, trap-nest records, selection and mating for color and other purposes; methods of preparing birds for show, rules of exhibitions, practice in judging, with standard of perfection. *(Junior or Senior year; 2 hours; laboratory fee $1.00.)*

VETERINARY SCIENCE

Professor Shealy

The aim of this department is to provide training which will enable students to detect diseases more readily and to understand their seriousness, and to become familiar with simple methods of treatment and means of eradication and prevention. All students interested in stockraising will find this training helpful. The courses also form a good foundation for students wishing to enter the profession of veterinary medicine.

VETERINARY SCIENCE I*b*.—*Veterinary Elements.*—Elementary anatomy and physiology of the domestic animals; causes and symptoms of common diseases of animals; methods of prevention, disinfection, and sanitation. Simple surgical operations, occasional clinics. *(For groups other than Animal Husbandry; Sophomore year; 3 hours.)*

VETERINARY SCIENCE II. — *Veterinary Anatomy and Physiology.*—Anatomy, including the skeleton, articulations, muscles, large blood-vessels and nerves, and internal organs; physiology, including circulation, respiration, digestion, and absorption; also the skin, the body excretions, the nervous system, and the special senses. *(Junior year; class 2 hours; laboratory 2 hours; credit 3 hours; laboratory fee $2.50 for each semester.)*

VETERINARY SCIENCE III.—*Diseases of Farm Animals.*—Causes, symptoms, treatment, and prevention of common

diseases of farm animals. Special attention given to contagious diseases, such as tuberculosis, hog cholera, contagious abortion, Texas fever, and rabies; sanitation following contagious diseases; technic of holding and study of findings of post-mortems. Clinic of at least 2 hours will be held one afternoon of each week. The use of serum and virus in the control of hog cholera will be demonstrated. *(Prerequisite: Veterinary Science I or II; Senior year; class 2 hours; clinic 2 hours; credit 3 hours; laboratory fee $1.00 for each semester.)*

VETERINARY SCIENCE IV*a*.—*Veterinary Hygiene and Farm Sanitation.*—Wholesome water, sources of water, impurities found in water; wholesome food, diseases caused by unwholesome food; pure air, impurities of air and diseases produced by them, ventilation, disposal of excreta; disposal of carcasses; disinfection, agents employed; sanitation following infectious diseases; hygiene of breeding animals. *(Elective; 2 hours.)*

VETERINARY SCIENCE V*b*.—*Parasitology.*—Common parasitic diseases of animals; life-history of parasites producing disease; symptoms of diseases, means of eradication and control of parasites. Lantern slides and natural specimens are used. *(Elective; 2 hours.)*

AGRICULTURAL JOURNALISM

Assistant Professor Stoutamire

AGRICULTURAL JOURNALISM I.—Principles of agricultural journalism; practical work in gathering and writing news, reading copy, editing. Students prepare copy for agricultural press. *(Junior or Senior year; 3 hours.)*

HORTICULTURE AND ECONOMIC BOTANY

Professor Floyd Assistant Professor Lord

In a subtropical climate unusual opportunities for the study of horticulture are presented. The wonderful variety of plants, the peculiar problems involved in their growth and development, and the accomplishments of those who have given time and labor to the solution of these problems, offer inviting fields for study and experiment. Both the practical and the esthetic tendencies may be cultivated.

The department with its orchard, garden, laboratory, and library, offers fine opportunity for instruction, experiment, and research.

HORTICULTURE A.—*Elements of Horticulture.*—The fundamental principles of horticulture; practice in the culture, propagation, pruning and training of the important fruit and ornamental plants of Florida. *(Short Courses, Vocational, Practice High School; class 2 hours, field or laboratory 2 hours; laboratory fee $1.00 for each semester.)*

HORTICULTURE I.— *Plant Propagation.*— Propagation by means of division, cutting, layering, budding, and grafting; seed selection, storing, and testing; and the fundamental physiological processes; practice in propagating common fruits, flowers, and shrubs. *(Freshman year; class 2 hours; field or laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

HORTICULTURE I*b*.—*Pruning.*—Principles of pruning and training; the physiological principles involved; practice in pruning and training fruit and ornamental plants. *(Sophomore year; class 2 hours, field or laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

HORTICULTURE II. — *Trucking.*— Vegetables adapted to Florida, seasons in which they are grown, cultural methods, fertilizing, irrigating, packing, and marketing. *(Sophomore year; class 1 hour, field or laboratory 2 hours, credit 2 hours; laboratory fee $1.00 for each semester.)*

HORTICULTURE III*b*.—*Floriculture.*—The growing of flowers upon the home grounds, pot plants, greenhouse crops and their cultural requirements, including ventilation, watering, and heating. *(Sophomore year; 2 hours.)*

HORTICULTURE IV*a*.—*Citrus Culture.*—The citrus grove; site and soil selection; preparation, planting and management; selection of varieties and stocks, and the use of cover crops. *(Junior year; class 2 hours, field or laboratory 2 hours; credit 3 hours.)*

HORTICULTURE V*b*.— *Citrus Harvesting, Marketing and Judging.*—Methods of picking, handling, washing, drying, packing, and shipping citrus fruits; identification of the leading commercial varieties and score-card judging. *(Junior year; class 2 hours, field or laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

HORTICULTURE VI*a*.—*Insects and Diseases of Citrus Fruits.* —Injurious insects and important physiological and fungus diseases and their treatment. *(Prerequisite or corequisite, IVa; Senior year; class 2 hours, laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

HORTICULTURE VII*a*.—*Subtropical Fruits.* — Avocados, mangoes, pineapple and other tropical and subtropical fruits particularly adapted to Florida; culture, varieties, insects, diseases, etc. *(Junior year; class 2 hours, field or laboratory 2 hours; credit 3 hours.)*

HORTICULTURE VII*b*.—*Deciduous Fruits.*—Peaches, pears, grapes, and other deciduous fruits with special reference to Florida conditions, culture, varieties, insects, diseases, etc. *(Junior year; class 2 hours, field or laboratory 2 hours; credit 3 hours.)*

HORTICULTURE VIII*b*.—*Plant Breeding.*—Cross pollination and hybridization of plants, improvement by selection, breeding for special qualities, methods of successful breeders; field work. *(Prerequisites: Ia and Botany I; Senior year, class 2 hours, field or laboratory 2 hours; credit 3 hours; laboratory fee $1.00.)*

HORTICULTURE IX*b*.—*Landscape Gardening.*—The principles of landscape gardening, suitable plants, improvement of home, school, and public grounds. *(Senior year; 2 hours.)*

HORTICULTURE X*a*.—*General Forestry.*—The principles of forestry, forest cropping, protecting the home wood lot, use of Florida woods, varieties of timber trees, and the influences of the forests on other industries of the State. *(Junior or Senior year; 3 hours.)*

BOTANY A.—*Agricultural Botany.*—The relationship habits, characteristics and environmental relations of the important crop plants, with laboratory study of principal types. *(Short Courses, Vocational, Practice High School; class 2 hours, laboratory 2 hours; laboratory fee $2.00 for each semester.)*

OTHER DEPARTMENTS

Descriptions of other subjects that may be taken by students in the College of Agriculture can be found by reference to the Index.

ONE-YEAR COURSE IN AGRICULTURE

This course will meet the needs of those who can spend only one year at school. The only requirement for admission is a knowledge of the common-school branches. Certificates will be granted to those who complete the work.

Names of Courses	Nature of Work	Hours per Week
(First Semester)		
Agronomy A*a*	Elements of Agronomy	3
Botany A	Agricultural Botany	3
Horticulture A	Elements of Horticulture	3
Animal Husbandry A	Elements of Animal Husbandry	3
Electives, not less than		6
		18
(Second Semester)		
Agronomy A*b*	Elements of Agronomy	3
Agronomy C	Farm Management	3
Animal Husbandry B	Livestock Feeding and Management	3
Agricultural Engineering A	Farm Machinery	3
Botany A	Agricultural Botany	3
Electives, not less than		3
		18

A second year's work may be taken provided one subject is selected in Agronomy, one in Animal Husbandry, one in Horticulture, Military Science I or II, and others to make up not less than 18 hours in all, with advice and consent of the Dean.

Students with High School preparation may take subjects from the Four-Year curriculum.

FOUR-MONTH COURSES IN AGRICULTURE

The work of each semester of the One-Year Course outlined above has been so planned as to form of itself a well rounded course of study which can be pursued to advantage by those unable to spend more than four months at the University. Each of these Four-Month Short Courses should appeal to farmers who wish to increase their productive power, to young men who expect to become farmers, and to those who are turning from other lines of work in order to obtain the advantages of country life.

Military Drill is not required of those who take one or both of these courses, but it may be elected.

FARMERS' WEEK

Beginning August 10, 1922; ending August 17, 1922.

Farmers' Week is especially suited to the needs of the fol-

lowing classes: Farm men and farm women of all ages who recognize their need for some training in scientific agriculture in order to render more effective the practical knowledge they have already gained; young men who are compelled to drop out of school and yet desire to devote a short time to special preparation for work on the farm; city students who wish to fit themselves for farm life; colonists who wish information regarding Florida conditions and methods.

The laboratory equipment, the purebred livestock, and the farms will be available for instruction; the Agricultural Experiment Station and State Plant Board will afford opportunity for observation and inquiry. Care has been taken to meet the needs of practical farmers. The courses will consist of lectures, laboratory work, and field observations and demonstrations in general field crops, soils, vegetable gardening, citrus, animal husbandry, dairying, poultry, veterinary science, bee culture, and agricultural engineering.

There are no age limits and no educational requirements for admission. No tuition fee is charged.

EXPENSES.—The necessary expenses for room and board will approximate $15.00.

The University Dormitories and Dining Room will be available.

CORRESPONDENCE COURSES

Correspondence Courses in Agriculture are offered under the General Extension Division. See page 172.

AGRICULTURAL MEETINGS

A large number of people interested in agriculture meet annually at the University. These find excellent accommodations and facilities better for their purposes than anywhere else in the State. Laboratories, classrooms, and exhibits, as well as the growing crops, barns, and other equipment, are placed freely at their service.

The following meetings were held during the past year:

1. Tenth Annual Citrus Seminar, October 4-5.
2. Live-Stock Round Up, October 6-7.
3. County Demonstration Agents, September 3-10.

AGRICULTURAL EXPERIMENT STATION

WILMON NEWELL, *Director*

STAFF.—Wilmon Newell, C. E. Bell, A. H. Beyer, O. F. Burger, J. M. Coleman, J. H. Jeffries, R. W. Ruprecht, J. M. Scott, W. E. Stokes, R. Stoutamire, W. B. Tisdale, G. Umlauf, T. Van Hyning, J. R. Watson, W. G. Wells.

AIM AND SCOPE.—Agricultural experiment stations are institutions, founded by Congressional act, the purpose of which is to acquire and diffuse agricultural knowledge. From the enacting clause it is evident that Congress intended to establish in connection with every college and university receiving the benefits of the original "Land-Grant Act" an institution for purely investigational work.

The Florida Agricultural Experiment Station was founded in 1887 and has continued without interruption. Inasmuch as its funds are obtained from Federal sources, it must comply with the Federal law: Its income must be used for acquiring new and important knowledge in regard to crops and soils and no part can be expended, directly or indirectly, for teaching purposes or for holding Farmers' Institutes, and only five per cent. for building or making repairs. In order to receive the benefits of the Adams fund, the Station must, before any money is spent in investigation, submit plans for proposed experiments to the U. S. Department of Agriculture for approval.

ADVANTAGES OF LOCATION.—The advantages of having the Agricultural Experiment Station at the University are obvious. At frequent intervals the investigators deliver popular and technical lectures, either to the student-body as a whole or to special clubs and local organizations. As the fields and orchards of the Station are used solely for experimental purposes and as its laboratories are planned and conducted for research work, they contribute to the opportunities of the students for studying methods of scientific investigation. Some of those with special aptitude have an opportunity of assisting the specialists in charge.

Minor positions, such as those of laboratory assistant, are occasionally open and, whenever practicable, are given to graduates of the University. Such assistants are paid a small salary for half of their time and during the other half are free to take studies leading to higher degrees.

BUILDING.—See page 20.

LINES OF INVESTIGATION.—The lines of investigation carried on fall naturally into several departments: Horticulture, including the introduction, breeding, and propagation of plants; Animal Industry, including the study of feed crops, the effect of feeding certain crops to cattle and hogs, and the growing of feed and forage crops; Agronomy, including the breeding of cotton, corn, and other farm crops; Plant Pathology, including the study of plant diseases produced by fungi and bacteria; Chemistry, including the study of fertilizers and soils, especially as to their effects on plants; Entomology, including the study of insecticides and insects and their parasites. The work of the Station is, however, not sharply divided among these different departments. The Staff formulate what are known as projects, the work of which is continued regardless of whether its ramifications take it into one or another department, and not infrequently two or more departments are engaged in the solution of the same project —in other words, the work is limited only by the abilities of the Staff and the resources of the institution.

PROJECTS.—Some of the more important projects are:

1. The study of soils and fertilizers in their relation to plant growth and development.
2. The study of certain citrus disease: gumming, melanose, anthracnose, blight, and stem-end decay.
3. The study of vegetable diseases: cantaloupe blight, bacterial diseases of cucumbers and other vegetables, and seed-bed diseases affecting lettuce, celery, eggplant, and tomatoes.
4. The study of the pineapple wilts.
5. The study of velvet-bean caterpillar.
6. The control of root-knot.
7. The control of thrips and scale-insects.
8. Sugar cane investigations.
9. The trying out of different forage crops for all kinds of livestock.
10. Experiments with different kinds of silage with a view to determining the best for the use of the Florida stock raiser.
11. Experiments with the dairy herd. Studying the value of velvet beans, peanut meal and cottonseed meal for milk production.
12. Comparison of the most economical rations for pork production.
13. Studying the effect of peanut meal on the quality of pork.
14. Studying the effect of velvet beans as a feed for brood sows.
15. Value of velvet beans and peanut meal for beef production.
16. Study of tobacco diseases.
17. Cooperative experiments with farmers in various sections of the State to ascertain the value of certain new forage crops.
18. Testing the native and extensively introduced wild grasses to determine their possible value as forage.
19. Study of diseases and insects of truck crops.

BRANCH STATIONS

The establishment of Branch Experiment Stations at Lake Alfred and Quincy, and one in the Everglades, will not only increase the scope of work of the Station, but will presently supply a large fund of information that will be of value to farmers and fruit growers in the different sections of the State.

PUBLICATIONS.—The publications fall into three classes: Bulletins, Press Bulletins, and Annual Reports. The Bulletins contain more or less complete results of some particular investigation. At least four are issued annually; one hundred and sixty have appeared. The Press Bulletins are prepared in order to bring to the citizens of Florida information connected with the investigations that are being carried on, before all the work necessary for the publishing of a Bulletin has been completed. They are issued at short intervals, three hundred and thirty-six having already appeared. The Annual Reports contain a brief statement of the work done, as well as of the expenditure of funds. Twenty-nine have been published.

All of these publications are distributed free upon request.

AGRICULTURAL EXTENSION DIVISION

WILMON NEWELL, *Director*

STAFF.—A. With headquarters at Gainesville: Wilmon Newell, A. P. Spencer, E. W. Jenkins, H. G. Clayton, S. W. Hiatt, R. W. Blacklock, N. W. Sanborn, J. M. Scott, Hamlin L. Brown, Ralph Stoutamire.

B. With headquarters at Tallahassee:

Miss S. W. Partridge, *State Agent.*
Miss H. B. Layton, *Assistant State Agent.*
Miss May Morse, *Assistant State Agent.*
Miss Minnie Floyd, *Assistant State Agent.*
Miss Estelle Bozeman, *Assistant State Agent.*
Miss Gladys Smith, *Assistant State Agent.*
Miss Lonnie I. Landrum, *District Agent.*
Miss Agnes I. Webster, *District Agent.*
A. A. Turner, *Local District Agent (Colored).*

COUNTY AGENTS.

County	Name	Address
Alachua	C. D. Gunn	Gainesville
Bay	R. R. Whittington	Panama City
Brevard	H. R. Tribble	Cocoa
Citrus	R. E. VanNess	Inverness
Clay	H. A. McDonald	Green Cove Springs
Dade	J. S. Rainey	Miami
DeSoto	G. W. Scally	Arcadia
Duval	W. L. Watson	Jacksonville
Escambia	J. Lee Smith	Pensacola
Flagler	L. T. Nieland	Bunnell
Gadsden	D. L. Campbell	Quincy
Hamilton	J. J. Sechrest	Jasper
Hernando	James Mountain	Brooksville
Hillsboro	R. T. Kelley	Plant City
Lake	E. F. DeBusk	Tavares
Lee	H. E. Stevens	Ft. Myers
Liberty	A. W. Turner	Bristol
Madison	B. E. Lawton	Madison
Marion	W. R. Briggs	Bradentown
Manatee	K. C. Moore	Ocala
Okaloosa	R. J. Hart	Laurel Hill
Orange	C. D. Kime	Orlando
Osceola	Leo H. Wilson	Kissimmee
Palm Beach	J. A. Dew	West Palm Beach
Pasco	F. G. Merrin	Dade City
Polk	Wm. Gomme	Bartow
Putnam	D. A. Armstrong	Palatka
St. Johns	J. O. Traxler	St. Augustine
St. Lucie	A. Warren	Ft. Pierce
Santa Rosa	John G. Hudson	Milton
Suwanee	C. E. Matthews	Live Oak
Taylor	R. J. Dorsett	Perry
Volusia	W. E. Dunaway	DeLand
Walton	J. W. Mathison	DeFuniak Springs

HOME DEMONSTRATION AGENTS.

County	Name	Address
Alachua	Ora Odom	Gainesville
Citrus	Beulah Pipkin	Inverness

Columbia	Marie Cox	Lake City
DeSoto	Mrs. Nettie B. Crabill	Arcadia
Duval	Ellen LeNoir	Jacksonville
Escambia	Dorothy Mitchell	Pensacola
Gadsden	Ruby McDavid	Hinson
Hamilton	Virginia Branham	Jasper
Hernando	Mrs. J. W. Palmer	Brooksville
Hillsboro	Stella M. Wiley	Tampa, City Hall
Hillsboro	Lucy Belle Settle	Plant City
Lee	Pansy Norton	Ft. Myers
Leon	Mrs. Mary S. Russell	Tallahassee
Madison	Audrey Scott	Madison
Manatee	Margaret Cobb	Bradentown
Okaloosa	Bertha Henry	Crestview
Orange	Mrs. Nellie W. Taylor	Orlando
Osceola	Albina Smith	Kissimmee
Palm Beach	Mrs. Edith Y. Morgan	W. Palm Beach
Pasco	Mrs. Harriet Ticknor	Dade City
Pinellas	Isabelle Thursby	Clearwater
Polk	Lois Godbey	Bartow
Putnam	Floresa Sipprell	Palatka
St. Johns	Anna E. Heist	St. Augustine
Santa Rosa	Mrs. Winnie W. McEwen	Milton
Suwanee	Alice Dorsett	Live Oak
Taylor	Pearl Lafitte	Perry
Volusia	Orpha Cole	DeLand
Walton	Mrs. Grace F. Warren	DeFuniak Springs

COOPERATIVE EXTENSION WORK.

The Agricultural Extension Division supports a system of practical education. It teaches the results of scientific experiments in farm crops and livestock, in orchards and gardens, and gives practical information gained by experience. It offers farm women instruction in home economics—practical instruction in the home or at a community center; scientific instruction thru special courses at the State College for Women. It teaches the boys and girls of farm homes the best practices in successful agriculture, horticulture and livestock, and stimulates through competition the application of such practices on the farm and in the home.

A synopsis of Co-operative Agricultural Extension Work includes:

(A) Demonstrations in agricultural and horticultural crops.
Demonstrations in dairying.
Demonstrations in hog raising.
Demonstrations in poultry raising.
Farmers' cooperative organizations.
Farmers' cooperative marketing and purchasing associations.
Demonstrations in insect and disease control.

(B) Boys' agricultural clubs:
Corn clubs.
Pig and fattening clubs.
Peanut clubs.
Calf clubs.
Potato clubs.
Bee clubs.

(C) Home Demonstration Work:
Gardening clubs.
Poultry clubs.
Beekeeping clubs.
Food conservation.
Nutrition.
Home dairy work.
Home improvement.

(D) Extension Schools:
Citrus seminar.
Live stock roundup.
County agents' annual meeting.
Home demonstration agents' annual meeting.
Boys' clubs annual meeting.
Girls' clubs annual meeting.
County agricultural schools, arranged by county agents.

(E) Demonstration work with colored farmers:
Agricultural club work for boys and girls.
Home demonstration work with colored women and girls.
Agricultural extension schools for colored people.

SMITH-LEVER ACT.—In accordance with the terms of the Smith-Lever Act, effective July 1, 1914, Agricultural Extension Work is carried on cooperatively by the U. S. Department of Agriculture and the State of Florida. In addition to this, in 1919 Congress passed the Smith-Lever Supplementary Act appropriating an additional sum for the same purpose.

The purpose of these Acts may be seen from the following quotation:

"That cooperative agricultural extension work shall consist of the giving of instruction and practical demonstration in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on in such a manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges receiving the benefits of this act."

By the terms of the Smith-Lever Act the College of Agriculture receives $10,000 a year, and an additional sum which increases annually provided that the State appropriates an equal amount. The Legislature has enacted laws enabling the

State to secure the benefits of both the original Smith-Lever and the Supplementary Act, the total amount of State and Federal funds consequently available for the fiscal year ending June 30, 1922, being $113,704.44.

The College is also permitted by the above-mentioned legislation to enter into agreement with the U. S. Department of Agriculture, whereby the Department provides specialists in livestock, dairying, fruit culture, trucking, and in home economics, who, working under the Director of Agricultural Extension Work and with County and Home Demonstration Agents, thus coordinate the activities of the Bureaus with those of the Agricultural Extension Division of the University.

ORGANIZATION.—The organization for Florida consists of:

The *Director,* the chief executive in shaping and directing policies and in arranging co-operation with other agencies.

The *Vice Director and County Agent Leader,* who has general supervision of county agent work, and specialists in men's work, and is assistant to the Director in a general way.

The *State Home Demonstration Agent,* who has general supervision of all Home Demonstration Work.

District Agents, who make visits regularly to the County and Home Demonstration Agents, advising them and planning their work. The State is divided into three districts: Central and East Florida, North and West Florida, and South Florida.

Boys' Agricultural Club Agent, in general charge of all Agricultural Clubs organized by County Agents.

The *Poultry Clug Agent,* who is responsible for all subject matter in poultry work conducted by Home Demonstration Agents, and who assists in organizing poultry clubs.

The *Home Dairying Agent,* who is responsible for subject matter to direct the proper dietary use of dairy products, dairy sanitation and home dairy problems.

Poultry Speciliast, who assists county workers in conducting poultry extension work.

Extension Dairyman, who is responsible for general plans to govern all dairy extension work.

Animal Industrialist, who is responsible for the subject matter governing all livestock extension work.

Agricultural Editor, who is responsible for editing all publications.

Conservation Specialist, who gives special study to the preparation of bi-products with a view to conserving them as food.

Nutrition Specialist, who gives special study to problems in nutrition.

County and Home Demonstration Agents, who visit farms and homes to enlist cooperation and to help in carrying out better methods of farming and home economics, to direct demonstration work and livestock and home economics, and to organize Farmers' Cooperative Associations and Rural Clubs. Each County Agent has a centrally located office, usually at the county seat, where bulletins, farm journals, and farm records are kept and where he spends one day in each week for consultations.

Counties desiring to cooperate are required to defray a part of the expenses incurred in the employment of County Agents.

SCHOOLS OF INSTRUCTION FOR EXTENSION WORKERS

COUNTY AGENTS' ANNUAL MEETING

The County Agents' Annual Meeting is held on the University campus during September. This meeting is intended to develop working plans for the State to acquaint all Extension workers with each phase of agriculture and horticulture that particularly applies to their county and to bring about a mutual understanding and good fellowship among the workers. It is also intended to harmonize the plans of the State and Federal supervisors so that there will be unity of action in the counties, and this will harmonize with the Agricultural Extension Work as carried out through all the United States. At this meeting committees are appointed to report on the important phases of the extension work to be continued thruout the coming year.

HOME DEMONSTRATION AGENTS' ANNUAL MEETING

This is conducted at the State College for Women at Tallahassee, and is confined principally to the activities of Home Demonstration Workers. Here also the national and state policies in this work are unified so that there will be harmony of effort from every supervising force.

To further unify the County and Home Demonstration work a joint meeting is conducted at the University of Florida

to deal with such problems as are common between these two phases of extension work.

BOYS' AGRICULTURAL CLUBS

Agricultural clubs are organized among the boys on the farms for the purpose of teaching them by practical demonstrations better methods of farming.

In order to touch the problems of the different sections, the following clubs are conducted: corn, peanut, sweet-potato, sugar-cane, pig, calf and bee clubs.

BOYS' SHORT COURSE

Business men and agricultural organizations annually give successful boys from as many counties as possible a free trip to the University to attend the Short Course in Agriculture. This has done much to stimulate greater interest in club work and has caused many boys to enter the College of Agriculture for a four-year course. Williamson & Dennis of Jacksonville offer a $250 scholarship in the College of Agriculture to the State Pig Club Champion.

HOME DEMONSTRATION WORK

GIRLS' CLUBS

Girls between the ages of ten and eighteen are eligible for membership. Each member is required to undertake a definite piece of work under the leadership of the County Home Demonstration Agent. This club work enters into many phases of home life and is intended to teach the girls the best practices that are recommended for the improvement and development of the rural home.

WOMEN'S HOME DEMONSTRATION CLUBS

Home Demonstration Clubs are organized by County Home Demonstration Agents for the benefit of the women of rural communities. These clubs have definite programs and stated intervals for meeting, and with the leadership of the Home Demonstration Agent undertake to carry out such programs as will assist them in improving many phases of home life, such as proper and economic foods and clothing for the family, labor-saving and sanitary devices for the home, water supply and sewage disposal, wholesome entertainment features and other phases of home economics. These clubs are organized by County Home Demonstration Agents, with the assistance

of supervising agents, under whose direction these agents work.

BOYS' CLUBS ANNUAL MEETING

This is conducted at the University of Florida and the attendance consists of members of the clubs who have been successful in their counties in club work. This is under the direction of the Boys' Club Agent, who prepares a definite program which includes classroom study, demonstrations in judging livestock, and field study of the agricultural and horticultural practices of the College of Agriculture and Experiment Station as conducted on the farms of these Institutions.

CITRUS SEMINAR AND LIVE STOCK ROUNDUP

These meetings are held on the University campus to interest citrus growers and livestock men in the development of their particular interests and in the work of the Agricultural College and the Experiment Station that is under way for their benefit. At these meetings the farmers and growers have an opportunity to come in contact with representatives of the U. S. Department of Agriculture, of the leading agricultural and horticultural papers and others who have given particular study to the agricultural and live stock problems of Florida.

CONTESTS AND FAIRS

Contests and fairs are conducted at the close of each season for the purpose of giving credits to club members for the work they have accomplished, to display the year's work so that it will be educational in a community, and to stimulate interest in every phase of home life. Exhibits are placed on display, record books are examined and rewards are based on quality, record and financial showing. Substantial prizes are offered to club members, such as scholarships to the State College for Women, money or merchandise. The State Fair held in Jacksonville, and the South Florida Fair, Tampa, allot space for the products of the Home Demonstration Work and provide liberal cash prizes to stimulate interest in these contests.

PUBLICATIONS

Bulletins.—Title	Pages	Edition
28. Some Florida Grasses	44	15,000
29. Commercial Truck Crops of Florida	36	20,000
Circulars		
12. Tractors in Florida	8	20,400
13. Corn Growing Suggestions for Negro Farmers	8	2,500
Annual Report	116	2,675
Agricultural News Service, 52 weeks, 475 copies	1	24,700

COLLEGE OF ENGINEERING

J. R. BENTON, *Dean*

FACULTY.—J. R. Benton, E. C. Beck, A. P. Black, A. Bresth, L. M. Bristol, H. S. Davis,* J. M. Farr, B. F. Gaines, W. R. Hale, T. M. Leigh, J. P. Little, Jr., W. S. Perry, Melvin Price, P. L. Reed, J. S. Rogers,† T. M. Simpson, K. T. Steik, A. J. Strong, J. A. Van Fleet, E. S. Walker, J. Weil.

GENERAL STATEMENT

AIM AND SCOPE.—It is the aim of the College of Engineering to furnish such training as will be useful to its graduates in the profession of engineering. Its courses of instruction are similar to those of other American engineering schools of college grade; its graduates are prepared to fill such positions as are usually allotted to young engineers.

Scholastic training alone cannot make a competent engineer, any more than it can make a competent physician or lawyer. It can, however, fit a man to enter the profession of engineering; and it is an important element in ultimate success in that profession.

The work of the College is divided among courses of study of the following types: (1) Courses in the sciences fundamental to the practice of engineering, of which mathematics, chemistry, and physics are the most important; (2) courses in various branches of engineering practice in which these sciences are applied, such as structural, steam, or electrical engineering; (3) courses in practical work, such as mechanic arts, drafting, or surveying; and (4) courses contributing primarily to general culture, such as those in English.

BUILDINGS AND EQUIPMENT.—The headquarters and principal building of the College is Engineering Hall, described on page 20. A description of the equipment is to be found on pages 26-28.

Provision is made for shop work in a large wing to Engineering Hall, as well as by temporary use of a separate building. (See page 20.)

Part of the work of the College of Engineering coincides

*Until January 28, 1922.
†After January 28, 1922.

with that of the other colleges of the University; for such work the same classrooms and laboratories are utilized.

ADMISSION.—See pages 42 to 46, inclusive. No students except adult special students are admitted with conditions in any *required* entrance units.

ORIENTATION.—During the first semester of the Freshman year, a course known as Orientation is required. This consists of lectures by practicing engineers and by members of the Faculty, about the work of engineers engaged in practice in the various branches of engineering. The purpose is to acquaint the students, early in their course, with the nature, ideals and status of the engineering profession; and to assist them in deciding what branch of engineering to follow.

The Lectures given in 1921-22, were as follows:

September 19th.—Dean Benton, "The Profession of Engineering."

September 26th.—President Murphree, "The University of Florida and Its Relation to the Industries of Florida."

October 3rd.—Professor Reed, "The Work of the Civil Engineer."

October 10th.—Mr. C. V. Turner, of Bartow, Fla., Consulting Engineer, "The Work of the Electrical Engineer."

October 17th.—Professor Price, "The Work of the Mechanical Engineer."

October 24th.—Dr. Steik, "The Work of the Chemist and the Chemical Engineer."

October 31st.—Mr. T. M. Bryan, of Gainesville, Fla., Architect, "Opportunities for Technical Graduates in Architecture."

November 7th.—Professor Bresth, "The Work of the Sanitary Engineer."

November 14th.—Dean Norman, "Opportunities for Technical Graduates in Teaching."

November 21st.—Major Van Fleet, "Opportunities for Technical Graduates in Military Service."

November 28th.—Mr. A. D. Stevens, of Jacksonville, Fla., Naval Architect and Consulting Engineer, "The Prospects and Possibilities of Naval Architecture."

December 5th.—Professor Turlington, "The Work of the Engineer as Affecting Agricultural Progress."

December 12th.—Mr. H. J. Morrison, Senior Highway

Engineer, U. S. Bureau of Public Roads, "Opportunities for Technical Graduates in Highway Engineering."

BENTON ENGINEERING SOCIETY.—Weekly meetings of this society are held, at which each member in turn presents a paper on some topic of interest to engineering students. Membership is strongly urged upon every student in the College.

EXPENSES.—See pages 35-37.

CURRICULA AND DEGREES.—Four curricula, each requiring four years, are offered. They lead to the degrees of Bachelor of Science in Civil Engineering (B.S.C.E.), in Electrical Engineering (B.S.E.E.), in Mechanical Engineering (B.S.M.E.), and in Chemical Engineering (B.S.Ch.E.), respectively.

The Freshman year is the same for all engineering students; the Sophomore year for electrical and mechanical engineering students. The work in English, economics, mathematics, mechanics, and physics is the same thruout the curriculum, for all engineering students, and in part coincides with that provided for students in the College of Arts and Sciences. All engineering students take some work in chemistry, drafting, surveying, and shop practice, but the time devoted to these subjects varies in the different curricula.

The degree C.E., Ch.E., E.E., or M.E., may be granted to a graduate of the College upon recommendation of the head of the department in which it is sought, and with the concurrence of the Faculty of the College, provided the candidate submits evidence that he has had, subsequent to graduation, from two to five years of successful and responsible engineering practice. The length of time demanded will depend on the character of the professional experience, and on the average grade which the candidate obtained while an undergraduate, which must be 90 or more in order to obtain the degree in two years. By "responsible" experience is meant work in which the candidate has to use his own initiative, as distinguished from the mere rendering of routine assistance.

The Bachelor degree (B.S.C.E., B.S.Ch.E., B.S.E.E., or B.S.M.E.) indicates merely the completion of a course of study in the theory of engineering; while the later degree (C.E., Ch.E., E.E., or M.E.) indicates demonstrated proficiency in the practice of some branch of engineering. Every student of engineering should look forward to obtaining one of these degrees eventually.

To obtain one of these degrees application should be made to the Dean of the College not later than April 1st preceding the Commencement at which the degree may be awarded.

ENGINEERING CURRICULUM

(For all Engineering Students)

Names of Courses	Hours per Week					
	1st Semester			*2nd Semester*		
Freshman Year	*	**	†	*	**	†
Descriptive Geometry	2	3	0	2	3	0
Descriptive Geometry Problems	0	0	2	0	0	2
English I	3	6	0	3	6	0
Mathematics I	3	6	0	3	6	0
Mechanical Drawing	0	0	4	0	0	4
Military Science I	2	2	4	1	2	5
Orientation	1	0	0	....	....	....
Physics I	3	4	0	3	4	0
Physics II	0	0	4	0	0	4
Woodworking	0	0	6	0	0	6
	14	21	20	12	21	21

CIVIL ENGINEERING CURRICULUM

Names of Courses	Hours per Week					
	1st Semester			*2nd Semester*		
Sophomore Year	*	**	†	*	**	†
Chemistry I	3	6	4	3	6	4
Mathematics III	3	6	0	3	6	0
Military Science II	2	2	4	1	2	5
Physics III	2	4	2	2	4	2
Surveying I*a* and I*b*	1	2	5	3	4½	6
	11	20	15	12	22½	17
Junior Year						
Economics VI*a*	2	2	0	....	....	....
Electrical Engineering I*a*	2	4	2	....	....	....
Graphic Statics	....	....	....	1	1½	3
Highways	....	....	....	2	3	0
Mathematics IV	2	4	0	2	4	0
Mechanics	4	8	0	3	6	0
Railroads	2	4	2	0	0	6
Strength of Materials	....	....	....	4	8	0
Surveying II	1	2	3	....	....	....
	13	24	7	12	22½	9

*Hours of recitation or lecture. **Estimated hours necessary for preparation. †Hours of laboratory, shop, field, or drafting-room work.

Senior Year

Contracts and Specifications	2	4	0	....	....	....
English XII	1	2	0	1	2	0
Geology	3	4	0	....	....	....
Hydraulics *a* and *b*	2	4	2	2	4	0
Municipal Engineering	2	2	2	4	6	4
Sociology	2	4	0	....	....	....
Structural Engineering	2	2	3	4	8	6
Testing Laboratory	....	....	....	0	0	2
	14	22	7	11	20	12

ELECTRICAL ENGINEERING CURRICULUM

NAMES OF COURSES	HOURS PER WEEK					
	1st Semester			*2nd Semester*		
Sophomore Year	*	**	†	*	**	†
Chemistry I	3	6	4	3	6	4
Forge and Foundry	0	0	3	0	0	3
Machine Drawing	0	0	3	0	0	3
Mathematics III	3	6	0	3	6	0
Mechanism	....	....	....	4	4	0
Military Science II	2	2	4	1	2	5
Physics III	2	4	2	2	4	2
Surveying I*a*	1	2	5	....	....	....
	11	20	21	13	22	17

Junior Year

Economics VI*a*	2	2	0	....	....	....
Electrical Engineering I*a* and I*b*	2	4	2	3	6	6
Electrical Engineering III*a*	1	2	2	....	....	....
Machine Shop I	0	0	6	....	....	....
Mathematics IV	2	4	0	2	4	0
Mechanics	4	8	0	3	6	0
Strength of Materials	....	....	....	4	8	0
	11	20	10	12	24	6

Senior Year

Contracts and Specifications	2	4	0	....	....	....
Electrical Engineering II	2	4	0	3	4	0
Electrical Engineering III*b*	....	....	....	1	2	2
Electrical Engineering IV	....	....	....	0	0	6
English XII	1	2	0	1	2	0
Thermodynamics	3	6	0	3	6	0
Hydraulics	2	4	2	....	....	....
Machine Design	2	4	0	2	4	4
Sociology	2	4	0	....	....	....
Steam Laboratory	....	....	....	0	0	4
	14	28	2	10	18	16

*Hours of recitation or lecture. **Estimated hours necessary for preparation. †Hours of laboratory, shop, field, or drafting-room work.

MECHANICAL ENGINEERING CURRICULUM

Names of Courses	Hours per Week					
	1st Semester			*2nd Semester*		
Sophomore Year	*	**	†	*	**	†
Chemistry I	3	6	4	3	6	4
Forge and Foundry	0	0	3	0	0	3
Machine Drawing	0	0	3	0	0	3
Mathematics III	3	6	0	3	6	0
Mechanism	....	....	....	4	4	0
Military Science II	2	2	4	1	2	5
Physics III	2	4	2	2	4	2
Surveying I*a*	1	2	5	....	....	....
	11	20	21	13	22	17
Junior Year						
Chemistry III*e*	1	0	4	1	0	4
Economics VI*a*	2	2	0	....	....	....
Electrical Engineering I*a*	2	4	2	....	....	....
Graphic Statics I	....	....	....	1	1½	3
Machine Shop I	0	0	6	....	....	....
Mathematics IV	2	4	0	2	4	0
Mechanics	4	8	0	3	6	0
Pattern Making	....	....	....	0	0	6
Strength of Materials	....	....	....	4	8	0
	11	18	12	11	19½	13
Senior Year						
Contracts and Specifications	2	4	0	....	....	....
Electrical Engineering V	....	....	....	0	0	6
English XII	1	2	0	1	2	0
Gas Engines	....	....	....	2	4	0
Thermodynamics	3	6	0	3	6	0
Hydraulics	2	4	2	....	....	....
Machine Design	2	4	0	2	4	4
Machine Shop II	0	0	6	....	....	....
Sociology	2	4	0	....	....	....
Steam Laboratory	....	....	....	0	0	4
Valve Gears	....	....	....	1	2	0
	12	24	8	9	18	14

*Hours of recitation or lecture. **Estimated hours necessary for preparation. †Hours of laboratory, shop, field, or drafting-room work.

CHEMICAL ENGINEERING CURRICULUM

Names of Courses	Hours per Week					
	1st Semester			*2nd Semester*		
Sophomore Year	*	**	†	*	**	†
Chemistry I	3	6	4	3	6	4
Chemistry III*e*	....	....	....	1	0	4
Forge and Foundry	0	0	3	0	0	3
Machine Drawing	0	0	3	0	0	3
Mathematics III	3	6	0	3	6	0
Military Science II	2	2	4	1	2	5
Physics III	2	4	2	2	4	2
Surveying I*a*	1	2	5	....	....	....
	11	20	21	10	18	21
Junior Year						
Chemistry III*e*	1	0	4	....	....	....
Chemistry V	3	6	4	3	6	4
Chemistry VII	0	0	6	0	0	6
Economics VI*a*	2	2	0	....	....	....
Mathematics IV	2	4	0	2	4	0
Mechanics	4	8	0	3	6	0
Strength of Materials	....	....	....	4	8	0
	12	20	14	12	24	10
Senior Year						
Chemistry VI	3	6	0	3	6	0
Chemistry X	....	....	....	0	0	10
Chemistry XI	3	6	0	3	6	0
Contracts and Specifications	2	4	0	....	....	....
Elective	....	....	....	3	6	0
English XII	1	2	0	1	2	0
Hydraulics	2	4	2	....	....	....
Sociology	2	4	0	....	....	....
	13	26	2	10	20	10

*Hours of recitation or lecture. **Estimated hours necessary for preparation. †Hours of laboratory, shop, field, or drafting-room work.

DEPARTMENTS OF INSTRUCTION

CIVIL ENGINEERING

Professor Reed Assistant Professor Bresth

The courses in this department are designed to give the student a comprehensive grasp of the principles underlying the practice of Civil Engineering, so that on graduation he will be fitted to enter at once upon field or office work in his profession.

The work of instruction is carried on by means of assigned recitations from standard textbooks, combined with laboratory, field, and drawing-room exercises for the purpose of emphasizing the practical side of the subject.

For equipment see pages 26 and 27.

A cement and concrete laboratory has recently been installed for the testing of cement and concrete. This laboratory is of late design and is a substantial addition to the other laboratory facilities of the department.

There will be found in the general library a considerable literature on all engineering subjects: more exhaustive treatises, as well as the current literature from which the student may keep abreast of up-to-date practice.

SURVEYING I*a*.—Recitations on the use of chain, compass, transit, and level; determination of areas, and instrumental adjustments. Field work in chaining, leveling, compass and transit surveys; and in tests and adjustments of instruments. Drawing-room work in calculations from field notes, and map-drawing. *(Required of all engineering students; first semester; Sophomore year. Recitations, 1 hour per week; field and drawing-room work, 5 hours per week. Prerequisites: Trigonometry; laboratory fee $3.00.)*

SURVEYING I*b*.—Recitations on balancing of surveys and calculating of areas; methods of making topographical surveys, including the use of the stadia and plane table; methods of solving other problems in land, topographical, and city surveying in which the principles of higher surveying are not involved. Field work: the making of a complete topographical survey, and the practical application of surveying to various other engineering problems. Drawing-room work on balancing survey, calculating area, and reducing field notes; plotting

maps and profiles; contour problems. *(Required of civil engineering students; second semester; Sophomore year. Recitations, 3 hours per week; field and drawing-room work, 6 hours per week; laboratory fee $3.00.)*

SURVEYING II.—Recitations on precision leveling, baseline measurements, and determination of meridian, latitude, and time. Field work in precision leveling, baseline work, and meridian and latitude observations. *(Required of civil engineering students; first semester; Junior year. Recitations, 1 hour per week; field work, 3 hours per week. Prerequisites: Surveying I and Math. III; laboratory fee $3.00.)*

RAILROADS.—Recitations on simple, compound, reversed, vertical, and transition curves, and earthwork. Field problems in curve layout. Drawing-room work in the paper layout of a railroad. Field and drawing-room work in the preliminary and final location of a railroad; plotting of line and profile; earthwork computations. Theory of mass diagram. *(Required of civil engineering students; Junior year. First semester; recitations, 2 hours per week. Field and drawing-room work, 2 hours per week. Second semester: field and drawing-room work, 6 hours per week. Prerequisite: Surveying I; laboratory fee $1.50 for each semester.)*

HIGHWAYS.—Recitations on the economics of location and construction of highways; drainage; different types of road construction; road materials; legislation; state and national aid; pavements. A few field exercises scheduled for railroads are devoted to highway work. *(Required of civil engineering students; second semester; Junior year. Recitations, 2 hours per week. Prerequisite: Surveying Ib.)*

GRAPHIC STATICS.—Recitations and drawing-room exercises in the computation of forces; the plotting of diagrams in elementary graphics and roof-truss problems. *(Required of all engineering students; second semester; Junior year. Recitations, 1 hour per week; drawing-room work, 3 hours per week. Prerequisite: Mechanics a.)*

HYDRAULICS *a*.—Recitations and laboratory work on the elements of hydraulics: dealing with the physical properties of water; head, loss of weight, center of pressure, dams, flow from orifices, jets; pressure-gages, meters, weirs, and other measuring instruments. *(Required of all engineering students; first semester; Senior year. Recitations, 2 hours per*

week; laboratory exercises, 2 hours per week. Prerequisites: Mathetmatics III and Mechanics; laboratory fee $3.00.)

HYDRAULICS *b.*—Recitations on the short tube and other tubes, flow through pipes, piezometer, hydraulic-gradient, nozzles, conduits, sewers, flow in streams, water power, turbines and wheels, stability of ships, and pumps. *(Required of civil engineering students; second semester; Senior year. Recitations, 2 hours per week.)*

CONTRACTS AND SPECIFICATIONS.—The contract in its relation to the engineer. Specifications. *(Required of all engineering students; first semester; Senior year. Recitations, 2 hours per week.)*

MUNICIPAL ENGINEERING.—A study of sewerage, water supply, and plain and reinforced concrete. Recitations on the design and construction of separate and combined sewerage systems; sewage disposal and treatment. Drawing-room work in the design of domestic and storm sewers, together with estimates of cost. Recitations on sources of water supply, purification of supply, filters, pumps, systems of supply, and fire supply. Drawing-room work in the design of a system. Recitations and drawing-room work on the theory and design of plain and reinforced concrete structures. *(Required of civil enginering students; Senior year. First semester; Recitations, 2 hours per week; drawing-room work, 2 hours per week. Second semester; Recitations, 4 hours per week; drawing-room work, 4 hours per week. Prerequisites: Mathematics III, Strength of Materials, and Hydraulics a.)*

STRUCTURAL ENGINEERING.— Recitations and drawing-room work in the graphic analysis of girders and bridge trusses. Theory and computations of stresses in various types of bridges and buildings. Theory and design of wooden and steel roof trusses; highway and railroad bridges; foundations. Theory of cantilever and continuous bridges. Drawing-room design. *(Required of civil engineering students; Senior year. First semester; Recitations, 2 hours per week; drawing-room work, 3 hours per week. Second semester; Recitations, 4 hours per week; drawing-room work, 8 hours per week. Prerequisites: Mechanics a and Strength of Materials.)*

TESTING LABORATORY.— Laboratory work in testing of stone, brick, and other road materials, and in cement, sand, concrete, timber, steel, and other materials used in construc-

tion. *(Required of civil engineering students; second semester; Senior year. Laboratory work; 2 hours per week. Prerequisite: Strength of Materials; laboratory fee $2.00.)*

ELECTRICAL ENGINEERING

Professor Benton — Assistant Professor Perry
Mr. Weil — Mr. Little

Instruction in this department is planned to lay equal stress on classroom work, of theoretical nature, and on laboratory work, of practical nature. For the latter, a well-equipt dynamo laboratory is provided, which is described on page 26.

ELECTRICAL ENGINEERING I*a*.—A short elementary course in general electrical engineering. *(First semester; 2 recitations or lectures and 1 two-hour laboratory exercise per week. Prerequisites: Mathematics III and Physics III; laboratory fee $3.00.)*

ELECTRICAL ENGINEERING I*b*.—Direct current machinery and applications. Textbook used in 1921-22: Langsford's Principles of Direct Current Machines. *(Required of Juniors in the electrical engineering course; second semester; 3 recitations and 2 three-hour laboratory exercises per week. Prerequisite: Electrical Engineering Ia; laboratory fee $3.00.)*

ELECTRICAL ENGINEERING II.—Alternating current machinery and applications; electric power transmission, and electric lighting. Textbook used in 1921-22: Franklin and Esty's Elements of Electrical Engineering. *(Required of Seniors in electrical engineering; 2 recitations per week the first semester, and 3 the second semester. Prerequisite: Electrical Engineering Ia.)*

ELECTRICAL ENGINEERING III*a*.—Telegraph engineering. Textbook used in 1921-1922: Hausman's Telegraph Engineering. *(Required of Juniors in electrical engineering; first semester; 1 recitation and 1 two-hour laboratory period per week. Prerequisites: Mathematics III and Physics III; laboratory fee $2.00.)*

ELECTRICAL ENGINEERING III*b*.—Telephone engineering. Textbook used 1921-1922: Shepardson's Telephone Apparatus. *(Required of Seniors in electrical engineering; second semester; 1 recitation and 1 two-hour laboratory period per week. Prerequisites: Electrical Engineering Ia and IIIa; laboratory fee $2.00.)*

ELECTRICAL ENGINEERING IV.—Dynamo laboratory work to accompany Electrical Engineering II. *(Required of Seniors in electrical engineering; second semester; 2 three-hour laboratory periods per week. Prerequisite: Electrical Engineering Ia; laboratory fee $3.00.)*

ELECTRICAL ENGINEERING V*b*.—Dynamo laboratory work, and electrical engineering problems. *(Required of Seniors in mechanical engineering; second semester; 2 three-hour laboratory periods per week. Prerequisite: Electrical Engineering Ia; laboratory fee $3.00.)*

MECHANICAL ENGINEERING

Professor Price Mr. Gaines

The instruction in this department follows theoretical and practical lines. System, accuracy, and neatness are insisted upon. While acquainting students with practical methods, the aim is to produce engineers of independent thought and original power.

DESCRIPTIVE GEOMETRY.—*Projections.*—Methods of representing points, lines, surfaces, and solids in space by their projections; their intersections with each other; the careful solution of many original problems on the drawing-board. *(Required of all engineering students; Freshman year; 2 hours.)*

DESCRIPTIVE GEOMETRY PROBLEMS.—*A companion course to Descriptive Geometry.*—Free-hand drawings and further drill in making neat, accurate drawings, mechanically. The latter deals exclusively with the solution of numerous problems of the intersection of lines, planes, and solids and is taught with special reference to developing originality in thinking and reasoning. *(Required of all engineering students; Freshman year; 2 actual hours. Prerequisite: Descriptive Geometry.)*

MECHANISM.—*The Kinematics of Machinery.*—Investigation of link work, construction of gears and cams, belt and pulley drive, trains of mechanism, the velocity ratio, and directional relation of the moving parts of various machines, etc. The text is supplemented by drawing exercises in the construction of gear teeth, cams, and motion diagrams. *(Required of electrical and mechanical engineering students; Sophomore year; second semester; 4 hours.)*

MACHINE DESIGN.—The design and proportioning of machine parts—bolts, riveted joints, keys and gibs, toothed gearing, belt transmission, shafts, journals, bearings; the design of machines or parts of machines to perform certain functions. *(Required of electrical and mechanical engineering students; Senior year; 2 hours of recitations per week thruout the year; also 4 actual hours of drafting-room work the second semester.)*

MECHANICS.—*Analytic and Applied Mechanics.*—The laws of force, friction, equilibrium of fluid pressure, inertia, centrifugal force, kinetic and potential energy, etc. Problems illustrating the practical application of these laws. *(Required of all engineering students; Junior year; 4 hours the first semester, 3 hours the second. Prerequisite: Mathematics III.)*

STRENGTH OF MATERIALS.—Investigation of the strength of materials used in the construction of machinery and engineering structures; analysis of stresses in bridges, roof trusses, and machinery; study of the mechanical properties of iron, steel, timber, cement, etc. The text is supplemented by laboratory tests on specimens of the various materials. *(Required of all engineering students; second semester; Junior year; 4 hours. Prerequisite: the first semester of Mechanics; laboratory fee $1.00.)*

THERMODYNAMICS.—The steam engine and the laws of thermodynamics; the indicator card; and the losses involved in the conversion of one form of energy into another. *(Required of mechanical and electrical engineering students; Senior year; 3 hours. Prerequisites: Mathematics III, Physics III, and Chemistry I.)*

GAS ENGINES.—The modern internal combustion engine, gas producers, and the utilization in them of liquid fuels. *(Required of mechanical engineering students; second semester; Senior year; 2 hours. Prerequisite: Thermodynamics.)*

VALVE GEARS.—Graphical study of the different types of steam engine valve gears by means of the Zeuner and other diagrams; valve setting and steam distribution obtained by the usual types. *(Required of mechanical engineering students; second semester; Senior year; 2 actual hours. Prerequisite: Thermodynamics.)*

STEAM LABORATORY.—Valve setting; tests of steam gauges, thermometers, engines, and boilers; use of the steam engine indicator, absorption and transmission dynamometers. *(Required of mechanical and electrical engineering students; second semester; Senior year; 4 actual hours; laboratory fee $5.00.)*

HUMAN ENGINEERING.—This course combines a study of some of the problems of production engineering with a study of certain questions of personnel management. *(Required of all engineering students; first semester; Senior year; 2 hours. Prerequisite: Economics VIa.)*

CHEMICAL ENGINEERING

Professor Leigh Assistant Professor Black
Assistant Professor Steik

CHEMISTRY III*e*.—*Qualitative Analysis*.—Mainly laboratory work with class hour for theory, reports and tests by arrangement. This course is given twice a year. Students may begin the course the first or the second semester. *(2 1-2 hours; laboratory fee $5.00 for each semester.)*

CHEMISTRY VI.—*Chemistry Technology*.—Consideration of chemical principles involved in manufacturing and refining products of commercial importance: Fuels, sulphuric acid, the soda and chlorine industries, fertilizers, cements, glass, pigments, coal-tar, mineral oils, soap, starch, sugar, fermentation, industries, explosives, textiles, paper, leather, etc. Visits are made to such factories and chemical plants as may be accessible. *(Required of chemical engineering students; Senior year; 3 hours.)*

CHEMISTRY X*b*.—*Engineering Chemistry*.—Analysis of materials connected with engineering: Fuels, boiler waters, iron and steel, Portland cements, asphalt and coal-tar products, mineral oils, vegetable oils, fats and waxes, paints, fertilizers, soaps, and food products. *(Required of chemical engineering students; Senior year; second semester, 10 actual hours; laboratory fee $5.00.)*

CHEMISTRY XI.—*Physical Chemistry*.—See Chemistry.

DRAWING AND MECHANIC ARTS

Acting Professor Strong Colonel Walker

The drawing courses are intended to develop accuracy, speed, neatness, and good form in drafting, sketching, trac-

ing, lettering, etc. Drafting-room practice and conventions are followed in sketching and drawing parts of machines and structures.

In the shops, by the use of standard tools and machines, the students learn something of the operations involved in building machinery and other articles of metal and wood.

DRAWING

MECHANICAL DRAWING.—The use of ordinary drawing instruments; the solution of geometrical problems; lettering; perspective, isometric, and some mechanical drawing from machine parts. *(Required of all engineering students; Freshman year; 4 actual hours.)*

MACHINE DRAWING.—*Interpreting and Reading Drawings.* —The student is required to make true working drawings, showing all the necessary dimensions and the delineation of the parts to a proper scale. He is given a set of detailed drawings from which to make an assembly drawing or vice versa. A number of tracings and blueprints are also required. *(Required of chemical, electrical, and mechanical engineering students; Sophomore year; 3 actual hours.)*

MECHANIC ARTS

WOOD WORKING.—*(a)*— Exercises in joinery, and some machine work.

(b)—Advanced work in cabinet making, furniture making and elementary patternmaking. *(Required of all engineering students; Freshman year; 6 actual hours; shop fee $3.00 for each semester.)*

FORGE SHOP *a.*—Instruction in forge shop practice by means of textbook, lectures and demonstrations. *(Required of chemical, electrical, and mechanical engineering students; one semester; Sophomore year; 3 actual hours; shop fee $3.00.)*

*FOUNDRY *b.*—Instruction in foundry practice by means of textbook, lectures, and demonstrations. *(Required of electrical and mechanical engineering students; one semester; Sophomore year; 3 actual hours; shop fee $3.00.)*

MACHINE SHOP I*a.*—Bench and machine work on small articles, furnishing all-around experience. *(Required of elec-*

*Pending installation of improved equipment 1½ hours class recitation and 1½ hours preparation will be substituted, temporarily, for 3 actual hours shop work.

trical and mechanical engineering students; first semester; Junior year; 6 actual hours; shop fee $6.00.)

MACHINE SHOP II*a*.—A more advanced course than I*a*, and on more difficult problems. *(Required of mechanical engineering students; first semester; Senior year; 6 actual hours; shop fee $6.00.)*

PATTERNMAKING I*b*.—Construction of wooden patterns and core boxes for machine castings and other small metal articles. *(Required of mechanical engineering students; second semester; Junior year; 6 actual hours; shop fee $4.00.)*

OTHER DEPARTMENTS

Descriptions of the other subjects taken by students in the College of Engineering may be found by reference to the Index.

COLLEGE OF LAW

HARRY R. TRUSLER, *Dean*

FACULTY.—H. R. Trusler, R. S. Cockrell, C. W. Crandall, W. G. Kline, J. H. Moore.

GENERAL STATEMENT

AIM AND SCOPE.—In 1891, the American Bar Association declared that in its opinion it was a part of the highest duty and interest of every civilized state to make provision for maintaining schools of law for the thoro legal education of all who are licensed to practice law. Recognizing the soundness of this statement and desiring to discharge this duty, the State Board of Education and the Board of Control provided for the opening of the College of Law in the University in September, 1909. The advantages to accrue to the State from having, as a part of its educational system, a thoro and systematic course of instruction in the common law, with special consideration of the peculiarities and exceptions applicable in Florida, are many and evident.

It was the purpose of the Board of Control to establish a law school which, by the quality of its work and character of its equipment, would merit and command the confidence and support of the bench and bar. That the hope of accomplishing these results was well founded is shown by the number and character of those who have availed themselves of the advantages offered.

REQUIREMENTS FOR ADMISSION.—Notice is given that, by action of the Board of Control, those entering as candidates for degrees during the session of 1923-24 must present, in addition to the requirement of sixteen entrance units (see pages 42 to 46), one year of college work; those entering thereafter must present two years of college work.

No specific course of studies is prescribed for the college work required for admission; but, in general, students are advised to pursue the course offered by the College of Arts and Sciences. Thereby it will be easier for them to complete the combined academic and law course should they so desire.

SPECIAL STUDENTS.—See "Adult Specials", page 33.

ADVANCED STANDING.—No work in law done in other institutions will be accepted towards a degree, unless the applicant passes satisfactorily the examinations held in the subjects in question in this College, or unless, by special vote of the Faculty, credit is given without examination. Credit for work not meeting the requirements of the Association of American Law Schools, of which this College is a member, will not be accepted. In no case will credit be given for work not done in residence at an approved law school.

EXAMINATIONS.—The last week of each semester is devoted to examinations covering the work of the semester. These examinations are in writing and are rigid and searching, but are not necessarily final.

All students, unless excused by the Dean, must present themselves for the regular examination in all the subjects for which they are registered. A delinquent examination is allowed for the removal of conditions, except in subjects where the semester grade falls below 60.

UNIVERSITY PRACTICE COURTS.—Thoroly organized practice courts are regular features of the third year of the curriculum. The object is to give the student practical instruction in pleading and practice at law and in equity, and experience in the preparation and trial of cases. The work is arranged as follows:

First.—Cases arising upon prepared statements of fact are assigned, upon which the students are to determine what proceedings to bring and how to bring them, issue, serve, and return process, prepare the pleadings, and to bring the case to an issue on a question of law. The case is heard on the sufficiency of the form and the structure of the pleadings; when these are approved the issue of law is argued and decided, the students acting as attorneys drawing the order, judgment, or decree to which they deem themselves entitled.

Second.—In the second class of cases, actual controversies are arranged and assigned for trial in the Circuit Court as issues of fact. After determining what action to bring, the students assigned to the case are required to issue the proper process and prepare and file the necessary pleadings, subpoena the witnesses, select the jury, examine and cross-examine the witnesses, and argue the case to the jury. Each student is

required to participate in the trial of at least one common-law, one equity, and one criminal case and is instructed in appellate procedure.

The Practice Court is conducted by Professors Cockrell and Crandall.

LIBRARY.—The Law Library contains:

Three sets of Florida Reports with Wurts' Digest (both editions); Shepard's Florida Citations; The Session Laws of Florida from 1822 to 1921, except from 1828 to 1834; McClellan's Digest and Duval's Compilation of the Laws of Florida; Revised Statutes of 1898; three sets of the General Statutes of 1906; two sets of Florida Compiled Laws of 1914; eight sets of the Revised General Statutes of Florida, 1920; Reports of the Florida Railroad Commission, the Attorney General of Florida, the Interstate Commerce Commission, and the Land Decisions of the Department of the Interior; Federal Statutes Annotated; Thorpe's American Charters, Constitutions and Organic Laws; Hinds' Precedents of the House of Representatives; the Northwestern, Southwestern, Northeastern, Southeastern, Atlantic, Pacific, and Southern Reporters; the American Decisions, American Reports, and American State Reports, with digests; the American Annotated Cases, with digests; the American and English Annotated Cases, with digests; the Lawyers' Reports Annotated, old and new series, with digests; the United States Supreme Court Reports, with digests; Rose's Notes; Federal Cases; Federal Reporter; Stimson's American Statute Law; the State Reports to the Reporters of Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, and Wisconsin; the New York Court of Appeals Reports; the New York Common Law and Chancery Reports, with digests; the Pacific States Reports, with digests, which include the California Reports, the Colorado Supreme Reports, the Colorado Appeals, the Idaho Reports, the Kansas Reports, the Montana Reports, the Nevada Reports, the New Mexico Reports, the Oregon Reports, the Utah Reports, the Washington Reports, and the Wyoming Reports to the Reporters; the Reprint of the English Reports; the English Law Reports; the British Ruling Cases; Mew's English Digest; Halsbury's Laws of England; the Century, the Decennial, the Second Decennial, and the Key Number Digests; the Encyclopedia of Law and Procedure; Corpus Juris; the Encyclopedia of Forms; the Standard Encyclopedia of Procedure; two sets of Ruling Case Law; the Harvard and Michigan Law Reviews; more than one hundred selected volumes for the class in Brief Making and the Use of Law Books; and more than two hundred of the leading textbooks and books of reference.

A course of instruction is given in legal bibliography and the use of law books. Every facility, also, is offered law students to make use of the General Library, in which are included works of interest and information to lawyers.

Both libraries are open during the academic year on every secular day between the hours of 8:00 a. m. and 10:00 p. m., and are in charge of trained librarians, who render needed aid to students.

MARSHALL DEBATING SOCIETY.—Early in the first year of the College the students organized a society that would secure to its members practice in debating and public speaking and experience in arguing legal questions, as well as drill in parliamentary law. The society was fittingly named "The Marshall Debating Society", in honor of the memory of the distinguished Southern jurist, John Marshall. Membership and work in the society are limited to students in the College of Law, but the Faculty give all possible assistance and encouragement.

UNIVERSITY PRIVILEGES.—The advantages of the other colleges of the University are open to such students in the College of Law as desire and are able to accept them. Courses in History, Economics, Sociology, Psychology, Logic, and English are particularly recommended. No extra charge is made for such courses, but they can be taken only with the consent of the Law Faculty and of the professors concerned.

DEGREES.—The degree of Bachelor of Laws (LL.B.) is conferred upon those who satisfactorily complete ninety semester hours in the course of study. Students admitted to advanced standing may receive the degree after one year's residence, but in no case will the degree be granted unless the candidate is in actual residence during all of the third year.

Students who have complied with all the requirements for the degree of Bachelor of Laws (LL.B.), who have maintained an average standing in their law studies 10% above the passing mark, and who have obtained the degree of A.B., or an equivalent degree, from an approved college or university, or who secure such degree the same year they complete their law course, will be awarded the degree of Juris Doctor (J.D.).

COMBINED ACADEMIC AND LAW COURSE.—See page 53.

EXPENSES.—A tuition fee of $20.00 per semester, payable in advance, is charged all law students, except those taking less than eleven hours of work, who are charged a proportional part of the full tuition. The cost of books for the first year will approximate $45.50; for the second, $42.50-$53, depending on the electives taken; for the third, $55.50. Students are urged to provide themselves with the statutes of their own state and a law dictionary. These books will form a nucleus for the student's future library; and by the purchase of second-hand books the cost may be materially reduced. See also pages 35-37.

ADMISSION TO THE BAR.—Upon presenting their diplomas, duly issued by the proper authorities, and upon furnishing satisfactory evidence that they are twenty-one years of age and of good moral character, the graduates of the College are licensed by the Supreme Court, without examination, to practice in the Courts of Florida. They also are admitted without examination to the United States District Court for the Northern District of Florida.

COURSE OF INSTRUCTION

The course of instruction extends thru three years of thirty-five weeks each, exclusive of vacations.

Particular stress is placed upon the statutory modifications of the common law and the recent decisions of the courts. This is true in every subject in the curriculum; but it is especially emphasized in Pleading, Practice, and Evidence, as the course of study is designed to instruct the student thoroly in the peculiarities of procedure, so that he will be able understandingly to enter upon the practice of law. Students are offered the option of comprehensive training under either the code or the common law.

FIRST YEAR

FIRST SEMESTER

TORTS.—History and definitions; elements of torts; conflicting rights; mental anguish; parties to tort actions; remedies; damages; conflict of laws; methods of discharge; comprehensive study of particular torts: false imprisonment, malicious prosecution, abuse of process, conspiracy, slander and libel, trespass, conversion, deceit, nuisance, negligence, and others. Textbooks: Burdick on Torts and Burdick's Cases on Torts, 3rd edition. *(5 hours. Professor Trusler.)*

CONTRACTS I.—Formation of contract; offer and acceptance; form and consideration; reality of consent; legality of object; operation of contract; limits of the contract obligation; assignment of contract; joint obligations; interpretation of contract. Textbooks: Anson's Law of Contract, Corbin's Edition; Huffcut and Woodruff's Cases on Contract. *(4 hours. Professor Moore.)*

CRIMINAL LAW.—Sources of criminal law; nature and elements of crime; criminal intent; insanity; intoxication; duress; mistake of fact or law; justification; parties in crime; offenses against the person, habitation, property, public health and morals, public justice and authority, government, and the law of nations. Textbook: Clark on Criminal Law, 3rd edition; selected cases. *(2 hours. Professor Cockrell.)*

CRIMINAL PROCEDURE.—Jurisdiction; arrest; preliminary examination and bail; grand jury, indictment and information and their sufficiency in form and substance; arraignment, pleas, and motions; *nolle prosequi* and motions to quash;

jeopardy; presence of defendant at the trial; verdict; new trial; arrest of judgment; judgment, sentence, and execution. Textbook: Clark's Criminal Procedure, 2nd edition; selected cases. *(2 hours. Professor Cockrell.)*

PROPERTY I.—Personal property; possession and rights based thereon; acquisition of title; liens and pledges; conversion. Textbook: Warren's Cases on Property. *(2 hours. Professor Crandall.)*

SECOND SEMESTER

EQUITY JURISPRUDENCE.—History and definition; jurisdiction; maxims; accident, mistake, fraud; penalties and forfeitures; priorities and notice; bona fide purchasers; estoppel; election; satisfaction and performance; conversion; equitable estates, interest, primary rights; trusts; powers, duties, and liabilities of trustees; mortgages; equitable liens; assignments; specific performance; injunction; reformation; cancellation; cloud on titles; ancillary remedies. Textbook: Eaton on Equity; selected cases. *(5 hours. Professor Trusler.)*

CONTRACTS II AND QUASI CONTRACTS.—Rules relating to evidence and construction; discharge of contract. Origin and nature of quasi contract; benefits conferred in misreliance on rights or duty, from mistake of law, and on invalid, unenforceable, illegal, or impossible contract; benefits conferred thru dutiful intervention in another's affairs; benefits conferred under constraint; action for restitution as alternative remedy for breach of contract and for tort. Textbooks: Anson's Law of Contract, Corbin's Edition; Woodruff's Cases on Quasi Contracts. *(3 hours. Professor Moore.)*

MARRIAGE AND DIVORCE.—Marriage in general; nature of the relation; capacity of parties; annulment; divorce; suit, jurisdiction, grounds; defenses; alimony; effect on property rights; custody and support of children; agreements of separation. Textbook: Vernier's Cases on Marriage and Divorce. *(1 hour. Professor Cockrell.)*

COMMON LAW PLEADING.—History and development of the personal actions at common law; theory of pleading and its peculiar features as developed by the jury trial; demurrers, general and special; pleas in discharge, in excuse, and by way of traverse; replication *de injuria;* duplicity; departure; new assignment; motions based on pleadings; general rules of

pleadings. Textbook: Andrews' Stephen's Common Law Pleading. *(3 hours. Professor Crandall.)*

SALES.—Sale and contract to sell; statute of frauds; illegality; conditions and warranties; delivery; acceptance and receipt; vendor's lien; stoppage *in transitu;* bills of lading; remedies of seller and buyer. Textbook: Burdick on Sales, 3rd edition; selected cases. *(1 hour. Professor Crandall.)*

PROPERTY II.—Introduction to the law of conveyancing; rights incident to the ownership of land, and estates therein, including the land itself, air, water, fixtures, emblements, waste; profits; easements; licenses; covenants running with the land. Textbook: Warren's Cases on Property. *(2 hours. Professor Crandall.)*

SECOND YEAR

FIRST SEMESTER

UNITED STATES CONSTITUTIONAL LAW.—General principles; distribution of governmental powers; congress; the chief executive; the judiciary; police powers; eminent domain; checks and balances; guarantee of republican government; civil rights; political privileges; guarantee in criminal cases; impairment of contractual obligations. Textbook: Hall's Cases on Constitutional Law, American Casebook Series. *(4 hours. Professor Kline.)*

AGENCY.—Nature of the relation; purposes and manner of creation; who may be principal or agent; ratification; delegation of authority; general and special agents; rights and duties of agents; termination, nature, extent, construction, and execution of authority of agents; rights, duties, and liabilities of agents; principal and third persons *inter se;* particular classes of agents. Textbooks: Mechem's Outlines of Agency and Mechem's Cases on Agency. *(2 hours. Professor Moore.)*

EQUITY PLEADING.—Nature and object of pleadings in equity; parties to a suit in equity; proceedings in a suit in equity; bills in equity; disclaimer; demurrers and pleas; answer and replication; preparation of bills, demurrers, pleas, answers. Textbooks: Fletcher's Equity Pleading and Practice; Rules of the Circuit Court in Chancery in Florida; Rules of the Federal Court; Statutes of Florida. *(3 hours. Professor Cockrell.)*

BRIEF MAKING AND THE USE OF LAW BOOKS.—Where to find the law; how to use statutes and decisions; how to find the law; the trial brief; the brief on appeal and its preparation. Textbook: Cooley's Brief Making and the Use of Law Books. *(1 hour. Professor Crandall.)*

PROPERTY III.—Titles and conveyancing, including acquisition of titles by possession, modes of conveyance at common law, under the statute of uses, and by statutory grant; the execution of deeds; estates created; covenants for titles; estoppel by deed; priorities among titles. Textbook: Aigler's Cases on Property. *(3 hours. Professor Crandall.)*

FLORIDA CONSTITUTIONAL LAW.*—Declaration of rights; departments of government; suffrage and eligibility; census and apportionment; counties and cities; taxation and finance; homestead and exemption; married women's property; education; public institutions; miscellaneous provisions. Textbooks: Constitution, statutes, and judicial decisions of Florida. *(2 hours. Professor Trusler.)*

CODE PLEADING.**—Changes introduced by the codes; forms of action; necessary allegations; the complaint; prayer for relief; answers, including general and special denials; new matter; equitable defenses; counter claims; pleading several defenses; replies and demurrers. Textbook: Pomeroy's Code Remedies. *(2 hours. Professor ————.)*

SECOND SEMESTER

EVIDENCE.—Judicial notice; kinds of evidence; burden of proof; presumptions of law and fact; judge and jury; best evidence rule; hearsay rule and its exceptions; admissions; confessions; exclusions based on public policy and privilege; corroboration; parol evidence rule; witnesses; attendance in court; examination, cross examination, privilege; public documents; records and judicial writings; private writings. Textbook: Greenleaf on Evidence, 16th edition, vol. 1; selected cases. *(4 hours. Professor Cockrell.)*

PRIVATE CORPORATIONS.—Nature; creation and citizenship; defective organization; promotors; powers and liabilities; corporations and the State; dissolution; membership; management; creditors; foreign corporations; practice in forming

*For students intending to practice in Florida.
**For students not intending to practice in Florida.

corporations, preparing by-laws, electing officers, and in conducting corporate business. Textbooks: Clark on Private Corporations, and Wormser's Cases on Corporations. *(4 hours. Professor Moore.)*

LEGAL ETHICS.—Admission of attorneys to practice; taxation; privileges and exemptions; authority; liability to clients and to third parties; compensation; liens; suspension and disbarment; duties to clients, courts, professional brethren, and to society. Textbooks: Attorneys at Law in Ruling Case Law and the Code of Ethics adopted by the American Bar Association. *(1 hour. Professor Trusler.)*

PROPERTY IV.—History of the law of wills and testaments; testamentary capacity and intent; kind of wills and testaments; execution, revocation, republication, revival of wills; descent; probate of wills and the administration of estates. Textbook: Costigan's Cases on Wills. *(3 hours. Professor Crandall.)*

FLORIDA CIVIL PRACTICE.* — Organization of courts; parties; joinder and consolidation of actions; issuance, service, and return of process; appearance; trial; verdict; proceedings after verdict; appellate proceedings; peculiar characteristics of the common law actions; special proceedings including certiorari, mandamus, prohibition, quo warranto, habeas corpus, attachment, garnishment, statutory liens, forcible entry and detainer, landlord and tenant. Textbook: Crandall's Florida Civil Practice. *(3 hours. Professor Cockrell.)*

GENERAL CIVIL PROCEDURE.**—The court; parties; forms of action; the trial; selection of jury and procedure in jury trial; judgment; execution; appeal and error. Textbook: Loyd's Cases on Civil Procedure. *(3 hours. Professor———.)*

THIRD YEAR

FIRST SEMESTER

INSURANCE.—Theory, history, significance; insurable interest; concealment, representations, warranties; subrogation; waiver and estoppel; assignees, beneficiaries; creditors; fire, life, marine, accident, guarantee, liability insurance. Text-

*For students intending to practice in Florida.
**For students not intending to practice in Florida.

books: Humble's Law of Insurance and Humble's Cases on Insurance. *(1 hour. Professor Trusler.)*

PUBLIC SERVICE CORPORATIONS.—Nature of public utilities; railroads and other common carriers of goods and passengers; telegraphs and telephones; light and water companies; inns; warehouses; elevators; stockyards; methods of incorporation; public control; rights and obligations at common law and under federal and state statutes. Textbook: Wyman's Cases on Public Service Companies, 3rd edition. *(2 hours. Professor Moore.)*

FEDERAL PROCEDURE AND BANKRUPTCY.—System of courts created under the authority of the United States, jurisdiction of the several courts and procedure therein; Federal and state bankruptcy legislation; who may become bankrupt; prerequisites to adjudication; receivers; trustees; provable claims; exemptions; composition; discharge. Textbooks: Hughes on Federal Procedure, and Remington on Bankruptcy, Students' Edition. *(3 hours. Professor Kline.)*

PARTNERSHIP.—Creation, nature, characteristics of a partnership; nature of a partner's interest; nature, extent, duration of the partnership liability; powers of partners; rights, duties, remedies of partners *inter se;* rights and remedies of creditors; termination of partnership. Textbook: Mechem on Partnership, 2nd edition; selected cases. *(2 hours. Professor Moore.)*

ADMIRALTY.—Jurisdiction; contracts, torts, crimes; maritime liens, ex contractu, ex delicto, priorities, discharge; bottomry and respondentia obligations; salvage; general average. Textbook: Hughes on Admiralty. *(1 hour. Professor Kline.)*

PROPERTY V.—Conditional estates; licenses and waivers; reversions and remainders; rule in Shelley's Case; future uses; future interests; executory devises and bequests; vesting of legacies; cross limitations; gifts; failure of issue; determination of classes; powers; rule against perpetuities; restraints on alienation. Textbook: Kales' Cases on Future Interests. *(3 hours. Professor Crandall.)*

MORTGAGES.—Nature; elements; incidents of the relation; discharge; assignment; redemption; foreclosure; injunction and account; extent of the lien; priority between mortgage

liens and competing claims; equity of redemption. Textbook: Durfee's Cases on Mortgages. *(2 hours. Professor Cockrell.)*

PRACTICE COURT.—*(1 hour.)*

SECOND SEMESTER

DAMAGES.—General principles; nominal; compensatory; exemplary; liquidated; direct and consequential; proximate and remote; general and special; measure in contract and tort actions; entire damages in one action; mental suffering; avoidable consequences; value; interest; lateral support; counsel fees and expenses of litigation; injuries to real property and limited interests; death by wrongful act; breaches of warranty. Textbook: Rogers' Law of Damages; selected cases. *(2 hours. Professor Trusler.)*

MUNICIPAL CORPORATIONS.—Creation of cities and towns; powers of a municipality, including public powers, power of taxation, power over streets and alleys, etc.; obligations and liabilities of municipal corporations; powers and liabilities of officers. Textbook: Elliott on Municipal Corporations, 2nd edition. *(1 hour. Professor Cockrell.)*

SURETYSHIP.—Nature of the contract; statute of frauds; surety's defenses against the creditor; surety's rights, subrogation, indemnity, contribution, exoneration; creditor's rights to surety's securities. Textbook: Spencer on Suretyship. *(2 hours. Professor Kline.)*

NEGOTIABLE INSTRUMENTS.—Law merchant; definitions and general doctrines; contract of the maker, acceptor, certifier, drawer, indorser, vendor, accommodater, assurer; proceedings before and after dishonor of negotiable instruments; absolute defenses; equities; payments; conflict of laws. Textbook: Bigelow on Bills, Notes and Cheques. *(2 hours. Professor Kline.)*

CONFLICT OF LAWS.—Jurisdiction; sources of law and comity; territorial jurisdiction; jurisdiction in rem and in personam; remedies, rights of action, procedure; creation of rights; property rights; personal rights; inheritance; obligations ex delicto and ex contractu; recognition and enforcement of rights; personal relations; property; inheritance; administration of estates; judgments and obligations. Textbook: Minor on the Conflict of Laws. *(2 hours. Professor Moore.)*

INTERNATIONAL LAW.—Nature, subjects, and objects of international law; intercourse of states; settlement of international differences; law of war; law of neutrality. Textbook: Hershey's Essentials of International Public Law; selected readings. *(1 hour. Professor Kline.)*

TRUSTS.—The Anglo-American system of uses and trusts; creation, transfer, extinguishment of trust interests; priorities between competing equities; construction of trust dispositions; charitable trusts. Textbook: Kenneson's Cases on Trusts. *(2 hours. Professor Moore.)*

JUDGMENTS.—Nature and essentials; kinds; record; vacation; amendment; modification; satisfaction. Textbooks: Rood on Judgments and Rood's Cases on Judgments. *(2 hours. Professor Crandall.)*

PRACTICE COURT.—*(1 hour.)*

TEACHERS COLLEGE AND NORMAL SCHOOL

J. W. NORMAN, *Dean*

FACULTY.—J. W. Norman, J. N. Anderson, E. C. Beck, J. R. Benton, A. P. Black, L. M. Bristol, L. W. Buchholz, C. L. Crow, H. S. Davis*, J. W. Day, J. M. Farr, J. R. Fulk, L. S. Green, W. B. Hathaway, J. M. Leake, T. R. Leigh, Joseph Roemer, T. M. Simpson, A. J. Strong, J. E. Turlington.

TEACHING FELLOWS.—R. L. Hamon, Homer Howard, Glenn B. Simmons, D. E. Williams.

GENERAL STATEMENT

AIM AND SCOPE.—It is the main purpose of the Teachers College and Normal School to furnish such training as will be most useful to its students in the profession of teaching. A teacher should be scholarly, but should also be resourceful in managing a schoolroom or a system of schools. This college attempts to give both kinds of training. More specifically, it prepares its students for positions as teachers, principals, supervisors and county or city superintendents of public instruction. It strives also to develop in its students a keen insight into human affairs, relationships and problems. About one-fourth of a student's time is devoted to professional subjects in Education, the other three-fourths to Arts and Science subjects.

DEGREES.—Courses are offered leading to the degrees of Bachelor of Arts in Education, Bachelor of Science in Education, and Bachelor of Science in Agricultural Education. For the Bachelor of Arts degree the major elective work must be chosen in Groups II and III, or Group II or III; for the Bachelor of Science degree, from Group IV. In addition to these degrees, the Normal Diploma, sometimes called the L. I. degree, is granted to those students who have finished the second year's work in Teachers College, with the exception that the foreign language work is elective, and that in the Sophomore year Education V*a* and VI*b* are required. Inasmuch as there is considerable agitation in the United States at present to make two years of training beyond the high

*Resigned.

school a minimum requirement for teaching in the elementary school, all students are urged by all means to complete this minimum requirement necessary to receive the Normal Diploma.

STATE CERTIFICATES.—Graduates of the Teachers College and of the Normal School are granted State Certificates without further examination—provided that one-fifth of their work has been devoted to professional training and provided that during each of the last two years of their course they have made a general average of eighty-five on all subjects and have not fallen below sixty in any subject. These State Certificates are converted into Life Certificates in the usual way.

REVIEW COURSES.—The Review Courses usually offered in the second semester, are intended to prepare for the examinations for County and State Certificates.

VOCATIONAL EDUCATION.—By act of the Legislature of 1917 the University was designated as the institution, under the Smith-Hughes Act, for training teachers for Agriculture and for Trades and Industries. Tentative curricula for Agricultural Education and for the Trades and Industries have been outlined. It is hoped that a large number of students will register for these courses. Many teachers of these subjects will be needed and good salaries will be paid.

The University will secure for students positions during vacations enabling them to gain the practical experience required of those taking courses in Vocational Education.

PEABODY HALL.—A description of Peabody Hall, the home of the College, is to be found on page 21.

LIBRARY.—The General Library, which is temporarily located in Peabody Hall, receives the best educational journals and contains the standard books on educational theory, general and special methods, the history of education, psychology and philosophy. Additions are made every year.

PEABODY CLUB.—This Club meets once a week to discuss educational problems, especially those that confront the young teacher. It also brings out the advantages of holding teachers' meetings and conferences. All students of the College are urged to become members and to take an active interest.

ORGANIZATION.—The Teachers College and Normal School has the following divisions:

(1) Teachers College.
(2) Normal School including Normal Training School.
(3) University Summer School.
(4) High School Visitation.
(5) Teachers' Employment Bureau.

TEACHERS COLLEGE

ADMISSION.—See pages 42 to 46, inclusive.

TEACHING FELLOWSHIPS.—See page 38.

ELECTIVES.—In order that they may be well prepared to teach in the high schools, students are required to continue three high school subjects in the College thru the Sophomore year. It is urged that they select the other electives from closely related subjects in order that they may become proficient in teaching these subjects. The choice of electives must be approved by the Dean and only in exceptional cases will he permit a student to do his supervised teaching who has not completed the minimum requirements in the Group in which he does his teaching.

CURRICULUM

Leading to the Degree of Bachelor of Arts or Bachelor of Science in Education

CONSTANTS.—i. e., subjects required of all students enrolled in Teachers' College.

Physical Education I	1 hr.	Required of Freshmen
Physical Education II	1 hr.	Required of Sophomores
Military Science I	3 hrs.	Required of Freshmen
Military Science II	3 hrs.	Required of Sophomores
English I	3 hrs.	Required of Freshmen
Psychology	1½ hrs.	Required of Sophomores
Educational Psychology	1½ hrs.	Required of Sophomores
Education I	3 hrs.	Year course; required of Freshmen
Education II	3 hrs.	Year course. Sophomores must take either Ed. II or Ed. VI*a* and Ed. IV*b*.
or		
Education VIa	1½ hrs.	first Semester
Education IVb	1½ hrs.	second Semester
Education IIIa	1½ hrs.	Required of Juniors; Sophomores admitted by permission.
Education IIIb or Education IVa	1½ hrs.	Juniors must take either Education IIIb or Education XIVb. Sophomores admitted by permission.
Education V	3 hrs.	Required of Seniors; Juniors admitted by permission.
Education XIVb	1½ hrs.	Required of Seniors; Juniors admitted by permission.
Education VIb	1½ hrs.	Required of Seniors; Juniors admitted by permission.

Total, 29 hrs. of constants.

Each student must select courses from three of the following Groups. *(See Regulation 2 below.)*:

A—Ancient Languages	B—Modern Languages	C—English
Required courses: Latin I Latin VI } 6 hours or Latin II Recommended courses: Latin III Latin IV Greek A Greek I or French A French I or Spanish A Spanish I	Required courses: French A French I or Spanish A Spanish I } 6 hours or German A German I Recommended courses: French II Spanish II German II Latin History I English IV, V or VI History IV	Required courses: English I (included among constants) English, 6 hrs. 6 hrs. from one foreign language } 12 hrs. Recommended courses: Other courses in languages and History V.
D—Mathematics	**E—Natural Science**	**F—Social Science**
Required courses: Mathematics I } 6 hrs. Math. III Recommended courses: Mathematics IV 3 hours from a Science Surveying	Required courses: Biology I Biology II Biology III } 16 hours Chemistry I Physics V Recommended courses: Chemistry III Advanced Physics Chemistry V	Required courses: History I History II History III } 15 hrs. Sociology I Economics I Recommended courses: Political Science Biology Psychology Philosophy Economics History Sociology

REGULATIONS:

1. All students must take all Constants.

2. Each student must select from three Groups of Studies from A to F, and must continue in those selected until completion of Sophomore year; at which time a student may concentrate upon two of these Groups by permission of the Dean.

3. Where the total number of hours of the three Groups combined does not equal 24, additional hours must be taken from the recommended courses in these Groups to make the total 24 or more.

4. A total of 68-year hours is required for graduation.

CURRICULUM, AGRICULTURAL EDUCATION COURSE

Leading to the Degree of Bachelor of Science in Agricultural Education.

Freshman Year

Names of Courses	Nature of Work	Hours per Week	
Agricultural Engineering Ia	Machinery and Motors	3	0
Agronomy I	Farm Crops	0	3
Animal Husbandry I	Types and Breeds of Animals	0	3
Biology I	General Biology	4	0
Biology II	General Botany	0	4
English I	Advanced Composition and Rhetoric	3	3
Horticulture Ia	Plant Propagation	3	0
Mathematics B*	Plane Trigonomy	2	2
Military Science		3	3
Physical Education		1	1
		19	19

Sophomore Year

Agronomy IIa	Soils	3	0
Agronomy IIIa	Forage Crops	3	0
Biology VI	Economic Zoology	3	3
Chemistry I	General Chemistry	5	5
Horticulture Ib	Pruning	0	3
Horticulture II	Trucking	2	2
or	or		
Animal Husbandry II and III	Animal Feeding and Breeding		
Military Science II		3	3
Veterinary Science I	Veterinary Elements	0	3
or			
Elective			
Physical Education		1	1
		20	20

Junior Year

Agronomy IVb	Fertilizers	0	3
Sociology IIIb	Rural Sociology	0	3
Education IIIa	Public School Administration and Supervision	3	0
Education IXa	Vocational Education	3	0
Education VIII	Methods in Vocational Agriculture	3	3
Education IVb	Adolescence	0	3
Biology XI	General Bacteriology	4	0
Biology XII	Agricultural Bacteriology	0	3
Electives in Agriculture		3	1
		16	16

*If Plane Trigonometry has been taken in high school, an equivalent number of hours in other work may be substituted.

Senior Year

NAMES OF COURSES	NATURE OF WORK	HOURS PER WEEK	
Agronomy VI—VII	Farm Management	3	3
Shop Work	Vocational Shop Work	3	3
Education XVI	Observation and Supervised Teaching	3	3
Education Vb	Principles of Education	0	3
English XIII	News Writing	1	1
Electives in Agriculture		5	2
		15	15

VOCATIONAL EDUCATION—TRADES AND INDUSTRIES CURRICULUM FOR TEACHERS OF RELATED SUBJECTS

Leading to the Degree of B. S. in Education

SUBJECTS OF STUDY	*HOURS PER WEEK	
Freshman Year		
Advanced Algebra, Trigonometry and Analytical Geometry	0	3
Descriptive Geometry	3	3
Elementary Woodworking	3	3
English I	3	3
Mechanical Drawing	2	2
Military Science I	2	0
Physics I	3	3
Physics II	2	2
Sophomore Year		
Carpentry	6	0
Chemistry I	5	5
Forge Shop	1½	0
Foundry	0	1½
Machine Drawing	1½	1½
Masonry and Concrete	0	3
Mechanical Technology	0	1
Military Science II	2	0
Physics III	3	3
Plumbing	0	3
Psychology	0	3
Principles of Teaching	0	3
Junior Year		
Analytical Mechanics	4	0
Architectural Drawing	3	3
Economics	3	0
Electrical Engineering Ia	3	0
Graphic Statics	0	2½
History of Vocational Education	0	3
Kinematics of Machinery	2	2
Machine Shop	3	0
Pattern Making	0	3
Sheet Metal	3	3
Strength of Materials	0	4

*The first column gives the hours per week for the first semester; the second, those for the second semester.

Senior Year

Electrical Engineering V	0	3
Gas Engines	0	2
Gas Engines, Laboratory	0	2
Machine Design	2	4
Machine Shop	3	0
Organization, Surveys, and Vocational Guidance	0	3
Supervised-Teaching	6	6
Steam Engines	3	0
Steam Engines, Laboratory	0	2
Vocational Methods	3	0

TWO-YEAR COURSE FOR TEACHERS OF RELATED SUBJECTS

Presupposing considerable practical experience

Subjects of Study	*Hours per Week	
First Year		
Elective Shop Work, Drawing, etc. (supplementing practical experience)	5	5
Elective Mathematics and Science	5	5
Elective English, Civics, Economics, Sociology, etc.	5	5
Elementary Psychology	5	0
Principles of Teaching	0	5
Second Year		
History of Vocational Education	0	3
Vocational Methods	3	0
Supervised Teaching	4	4
Organization, Surveys, and Vocational Guidance	0	3
Elective Shop, Drawing, or Applied Science	13	10

*The first column gives the hours per week for the first semester; the second, those for the second semester.

DEPARTMENTS OF INSTRUCTION

EDUCATION

Professor Norman
Professor Fulk
Professor Buchholz
Professor Roemer
Professor Day
Professor Green

DESCRIPTION OF COURSES

EDUCATION I*a*.—*An Introduction to the Study of Education.*—This course consists of recitations, observation, and partial participation. During each week some particular phase of classroom activity is discussed, illustrated and participated in by instructor and students. The work of each week consists of one period of lecture or conference, and four periods of laboratory work in the classroom supplemented by individual conferences with the teacher in charge of the room and the director of the course. *(Required of Freshmen; first semester; 3 hours. Professor Norman.)*

EDUCATION I*b*.—*Education in the United States.*—A general view of education; present-day public school problems studied extensively in the light of their historical development; our European educational background; beginnings in America; early attitude of federal and state governments toward education; the struggle for free state supported, state controlled schools; new conceptions, extensions and reorganizations in public education. *(Required of Freshmen; second semester. 3 hours. Professor Fulk.)*

EDUCATION II*a*.—*Reviews and Methods of Teaching Arithmetic and Grammar.*—A review of arithmetic and grammar, to acquaint the student with the fundamental principles of the subjects, followed immediately by methods of teaching them. *(Students may choose between Education IIa and Education VIa. First semester; 3 hours. Professor Buchholz.)*

EDUCATION II*b*.—*Reviews and Methods of Teaching Reading, Geography, and History.*—Mastery of each subject from the teacher's point of view, followed immediately by the best methods of teaching the subject. *(Students may choose between Education IIb and Education IVb. Second semester; 3 hours. Professor Buchholz.)*

EDUCATION III*a*. — *Administration and Supervision of Village and Consolidated Schools.*—A course stressing in a practical way problems peculiar to these schools in Florida;

their relation to federal, state and local government; the supervising principal, qualifications, relation to superintendent, boards, teachers, pupils, patrons and community; adapting the school to the child's needs, organization, curriculum, attendance, promotions, tests, health work; business practices, school finance, material equipment, school housekeeping, records and reports. *(Required of Juniors; first semester; 3 hours. Professor Fulk.)*

EDUCATION III*b*.—*Problems in Public School Administration and Supervision.*—Present tendencies and problems in school organization, administration and supervision in state, county and city, with special application to conditions in Florida; evolution, duties and powers of educational authorities; inter-relation of boards, officers and teachers; work of the superintendent and supervising principal, selection and supervision of teaching corps; improvement of teachers in service; the curriculum; types, promotional plans, care of backward, defective, and gifted children; teachers' councils; health supervision; fundamental reorganizations; auxiliary educational agencies; testing results of teaching; interesting the public in the school; business management, finance, reports and records. Selection will be made from above topics to meet needs of class. Course will include a study of one school survey. Visits will be made to assigned schools for the study of administrative and supervising practice. *(Juniors may choose between Education IIIb and Education XIVb. Second semester; 3 hours. Professor Fulk.)*

EDUCATION IV*b*.—*Psychology of Adolescence.*—The purpose of this course is to give high school principals and teachers a deeper, fuller appreciation of the habitual and impulsive life of boys and girls in their teens. Topics: preadolescence; the physical and mental traits of high school pupils; individual differences among high school pupils and their implications; motor training, gymnastics, athletics, play, sport, and games as they function in the education of the youth; growth of social ideals; adaptation of school work to intellectual development; the psychology of faults, lies and crimes of high school pupils; moral and religious training. *(Second semester; 3 hours. Required of Sophomores. Professor Roemer.)*

EDUCATION IV*a*.—*High School Curriculum.*—This course is designed to consider the problems of the curriculum of the high school in its organization. Among the topics treated are: standards for the selection of the curriculum; factors to be considered—age of pupils, social standing, probable school life, probable vocation; its traditional subjects and their possible variations; new subjects and their values; systems of organization, election and prescription; problems of articulation with the elementary school, the college, the vocational school, and the community. *(Required of Seniors. First semester, 3 hours. Professor Roemer.)*

EDUCATION V*a*.—*The Technique of Teaching.*—The laws of learning, lesson-planning, thinking, questioning, the problem-project method, the socialized recitation, democracy in the classroom as a preparation for democracy in life. Textbook: Colvin's "An Introduction to High School Teaching." *(Required of Seniors; Juniors admitted by permission. First semester; 3 hours. Professor Norman.)*

EDUCATION V*b*.—*History and Philosophy of Education.*—Standards in education, past and present; the development and present meaning of the concept of culture, humanism, utility, growth, mental discipline, activity leading to further activity, education according to nature, the significance of child life in education. Textbook: Dewey's "Democracy and Education." *(Required of Seniors; Juniors admitted by permission. Second semester; 3 hours. Professor Norman.)*

EDUCATION VI*a*.—*Child Study.*—The nature, growth and development of the child from birth to adolescence with reference to education; the original nature of the child and his education; the meaning of protracted infancy; training in recognition of types and individual differences, of common defects and how to deal with them; cultivation of intelligent sympathy with children; the effect of Child Study on the practices of elementary and secondary education. *(Sophomores may choose between Education VIa and Education IIa. First semester; 3 hours. Professor Fulk.)*

EDUCATION VI*b*.—*Supervised Teaching.*—Knowledge of the principles, theory and history of education will better fit any teacher for his work, but these without concrete experience and supervision will not give best results. This course is planned to give the student practice in conducting recita-

tions under close supervision. Lesson plans will be required for all recitations and the manner of teaching will be subject to criticism. Students preparing to teach agriculture must do their supervised teaching in that subject, and four (4) hours will be required. (See Education XVI.) For prerequisites see page 143. *(Required of Seniors; 3 semester hours.)*

EDUCATION VII*b*.—*Educational Psychology.*—Psychology applied to Education, the learning process, acquisition of skill, etc. *(Second semester, 3 hours. Required of all students in Teachers College, preferably during the Sophomore year. Professor Norman.)*

EDUCATION VIII.—*Methods and Materials in Vocational Agriculture.*—Among the topics considered in this course are the selection and organization of subject matter from the vocational point of view; the home project and supplementary supervised practice work; the selection, arrangement, and classification of bulletins, books, and periodicals; methods to be employed in the recitation, the laboratory, the field trip, the farm shop, and the supervised study period; lesson planning; assignment making; the farm job as the teaching unit; the teaching of the various branches of agriculture; the selection and use of objective materials; the necessary plant and equipment; community and promotional work; and the organization and conducting of part-time and evening classes. *(Junior year; 3 hours. Professor Day.)*

EDUCATION IX*a*.—*Vocational Education.*—This course includes a consideration of the development, function and scope of vocational education of various kinds, particular attention being given to agricultural education. A study is made of the aims and purposes of rural education and the important problems connected with it. *(Sophomore year, second semester; 3 hours. Professor Day.)*

EDUCATION X*a*.—*The Elementary School Curriculum.*—An attempt to formulate a curriculum based on social conditions, and social needs; a brief historical development of content; selection and evaluation of material in the light of aims and activities of the present social situation, and the nature and needs of child life; inherited traditional matter; the curriculum as a group of related problems and projects of vital interest to children, and its relation to pre-school life; the place of the kindergarten; the six or eight year curriculum; deferred

values and the secondary curriculum; variation in subject-matter and method of teaching determined by home and community; study of curricula made to meet individual and community needs; importance of the classroom teacher, his spirit, vision and enthusiasm in presenting and interpreting subject-matter. *(Elective for Juniors and Seniors; first semester; 3 hours. Professor Fulk.)*

EDUCATION X*b*.— *Educational Hygiene.*— Conditions and forces that affect the physical and mental vigor of children and teachers, and relate the school to the health of the home and community; location and sanitation of school buildings; hygienic furniture; diseases and physical defects; medical inspection; hygiene of instruction; teacher's health; play and recreation; teaching of hygiene. *(Elective for Juniors and Seniors; second semester; 3 hours. Professor Fulk.)*

EDUCATION XI.—*Educational Diagnosis.*—The making of school surveys; the use of scales for measuring educational products; educational stock-taking. How to determine what kind of school a community needs, and what progress pupils are making, etc. *(Elective for Graduate Students; 3 hours. Professor Roemer.)*

EDUCATION XII.—*Current Educational Problems.*—Problems vitally important to the success of the teacher. Various phases of school life and activities will be discussed and some attention will be given to educational administration and school law as they affect the teacher. *(Elective for Graduate Students, 3 or more hours. Professor Norman and Professor Fulk.)*

EDUCATION XIV*a*.—*Junior High School.*—The purpose of this course is to give principals and teachers a knowledge of the Junior High School and its organization. Since the movement is in its formative period in Florida, much attention and study will be given to concrete cases and local conditions. Topics: Need of reorganization of the traditional high school; changes needed in the program of studies, discipline, methods of teaching, etc.; development of the Junior High School; special function of the Junior High School; organization, curricula and courses of study, etc., of the Junior High School. *(First semester; 3 hours. Professor Roemer.)*

EDUCATION XIV*b*.— *High School Administration.*—This course is designed to study the practical management and

administration of the modern high school. It will consider such topics as: duties of principal as head of school; relation of principal to board of education, superintendent, teachers, pupils and community; legal status of high school; systems of financing; selection, supervision, promotion, retention and dismissal of teachers; adjustment of teaching load; testing and grading of pupils; problem of discipline; pupil guidance, athletics, wider use of school plant, supervised study, student activities, teachers' meetings, etc. *(Junior students may choose between Education XIVb and Education IIIb. Second semester; 3 hours. Professor Roemer.)*

EDUCATION XV.—*Democracy and Education.*—The nature of experience, the nature of institutions, the social inheritance, the individual, society, socialization, social control, dynamic and static societies, education its own end. *(Elective for Seniors and Graduate Students. 3 hours. Professor Norman.)*

EDUCATION XVI.—*Supervised Teaching of Vocational Agriculture.*—Supervised teaching is conducted with a class of boys from the local high school under conditions that are identical with those found in the Smith-Hughes Agricultural Schools of the State. Lesson planning, teaching, the conducting of project work and home practice work, and the performance of the other activities of the teacher of vocational agriculture are carried on under supervision. *(Senior year; 3 hours. Professor Day.)*

ITINERANT PLAN OF TRAINING INDUSTRIAL TEACHERS

Under the Smith-Hughes Act there are two types of teachers of trade and industrial education: the shop teacher, who gives instruction in the actual shop or trade manipulative subjects—carpentry, machine shop, blacksmithing, printing, etc.; the related-subject teacher, who teaches the technical branches relating to the trade—drawing, related mathematics or science.

In cooperation with the State Board for Vocational Education, the University is securing as many as possible related-subject teachers from the industries of the State, altho a few may be obtained from among the members of the teaching profession. All of the shop teachers will be obtained from the industries. Prospective trade and industrial teachers are selected because of their industrial experience, education,

moral and civic ideals, and potential teaching ability, which qualifications are determined mainly by personal interview and by careful inquiry of fellow-workmen and employers. Once selected, these prospective teachers, obviously varying greatly in preparation, are grouped in evening classes in their home cities and trained by a representative of the University in the art of teaching, altho as much as possible of the work in Supervised Teaching is done in part time classes.

As demand arises, those who have successfully completed the courses are, with the approval of the State Board for Vocational Education, put into service by local boards. Fifteen men have up to the present time been thus trained and immediately afterwards placed in teaching positions.

The subjects taught are divided into four groups, each usually requiring thirty hours for completion. If possible, however, much more than thirty hours will be devoted to the Supervised Teaching, especially as thru this most of the Observation will also be accomplished.

The course will in general be as follows:

A.—History and Development of the Vocational Education Movement; Mechanics of Teaching; Shop Organization; Educational Law (state and national); Trade Analysis for Educational Purposes.

B.—Applied Science; Shop Mathematics; Mechanical Drawing and Design; Industrial Methods.

C.—Supervised Teaching.

D.—Supervised Teaching; Observation; Making Up Deficiencies in Trade or General Education and in Trade Experience.

NORMAL SCHOOL

COURSES AND REQUIREMENTS

The Normal School offers a four-year normal curriculum. This curriculum is similar to that of the standard normal schools of this country. Applicants who have finished the first two years of a high school, or those who hold a First Grade County Certificate, will be admitted to the first year of this curriculum. High school graduates will be allowed to enter the third year. Teachers with experience and mature persons may be admitted as "Adult Specials" without meeting these requirements. Graduates of the Normal School will be admitted to the Junior class of the Teachers College and will be granted a State Certificate, provided they make an average of eighty-five per cent in all subjects during the third and fourth years.

STUDIES.—The work of the first two years of the Normal School is equivalent to that of the eleventh and twelfth grades of the standard high schools of Florida. Not less than 15 nor more than 20 hours may be taken in any one year except by special permission. All choice is subject to the approval of the Dean of Teachers College. The work is arranged so that students may enter at any time, but it would be more convenient both to the student and to the Normal School for entrance to be made at the first of the year, at Thanksgiving, the first of the second semester, or the first of April. Students who enter at these times may secure credit for the quarter in which they are registered.

DRILL.—Students below the Freshman class are not required to drill.

CURRICULUM FOUR-YEAR NORMAL

First Year

NAMES OF COURSES	NATURE OF WORK	HOURS PER WEEK
English NI	Rhetoric, Composition and Classics	4
History NI	Modern European History	4
Mathematics NI	Plane Geometry	4
Take 5 hours of the following:		
Agriculture NI	Elements of Agronomy and Horticulture	3
Education NI	General Pedagogy	4
Latin NI	Beginner's Course	4
Mechanic Arts NI*a* and NII*b*	Wood work	3
Science NI	Biology	4
Science NII	Chemistry	4
Spanish NI	Beginner's Course	4
Required		20

Second Year

English NII	Rhetoric, Composition and Classics	4
History NII	American History and Civics	4
Take 10 hours of the following:		
Agriculture NII	Elements of Animal Husbandry and Agricultural Engineering	3
Education NII	School Management	4
Latin NII	Caesar (3 books) and Composition	4
Mathematics NII	Plane Trigonometry and Solid Geometry	4
Mechanic Arts NIII*a* and NIV*b*	Forge and Foundry Work	4½
Science NIII	Physics	4
Spanish NII	Second Year Course	4
Required		20

Third Year

(Same as Freshman year in Teachers College, except that foreign language is elective.)

Fourth Year

(Same as Sophomore year in Teachers College, except that foreign language is elective and Education V*a* and VI*b* are required.)

DEPARTMENTS OF INSTRUCTION

AGRICULTURE

AGRONOMY NI.—*Agronomy and Horticulture.* (See pages 91 and 97.)

AGRICULTURE NII.—*Agricultural Engineering and Animal Husbandry.* (See pages 92 and 93.)

EDUCATION

Professor Buchholz

EDUCATION NI.—*General Pedagogy, Reviews and Methods.*—Elementary principles of school control. Review of subjects to be taught, methods of teaching. *(4 hours. Omitted 1922-23.)*

EDUCATION NII.—*School Management and Methods.*—Special attention given to the management of rural schools. Methods of study and teaching. *(4 hours. Omitted 1922-23.)*

ENGLISH

Professor Hathaway

ENGLISH NI.—*Composition and Grammar.*—A course designed for those of limited preparation or wishing an intensive review for teachers examination. *(First year; 4 hours.)*

ENGLISH NII.—*Composition and Classics.*—The elements of composition emphasized; grammar reviewed. Much written work required. Carefully selected list of classics prescribed for reading and study. *(First year; 4 hours.)*

ENGLISH NIII.—*Composition, Rhetoric and Classics.*—Broader and of higher grade than English NI, which is presupposed. The structure of the sentence, the paragraph, and the connected paragraph stressed. *(Second year; 4 hours.)*

HISTORY

Professor Buchholz Professor Fulk

HISTORY NI.—*Modern European History.*—Medieval history touched lightly, stress being placed upon modern European history. Textbook and reference reading. *(First year; 4 hours. Professor Buchholz.)*

HISTORY NII.—*American History and Civics.*—Early discoveries to the present time; civics in connection with the history. Stress will be laid upon local history, geography and industries, transportation and communication, organized community life and public health, local, state and national governments. Textbook and reference reading. *(Second year; 4 hours. Professor Fulk.)*

LATIN

Professor Hathaway

LATIN NI.—*Beginner's Latin.*—A good first-year book will be completed. *(First, second or third year; 4 hours.)*

LATIN NII.—*Caesar, Composition and Grammar.*—Three books of Caesar, with composition and grammar. *(Second, third or fourth year; 4 hours.)*

MANUAL TRAINING

Professor Strong

MECHANIC ARTS NI*a*.—See Wood Working *a*, College of Engineering.

MECHANIC ARTS NII*b*.—See Wood Working *b*, College of Engineering.

MECHANIC ARTS NIII*a*.— See Forge Shop, College of Engineering.

MECHANIC ARTS NIV*b*.—See Foundry, College of Engineering.

MATHEMATICS

Professor Norman

MATHEMATICS NI.—*Second Year Algebra.*—Second half of the State-adopted textbook. *(First year; 4 hours.)*

MATHEMATICS NII.—*Plane Geometry.*—First five books in Plane Geometry. *(First year; 4 hours.)*

MATHEMATICS NIII.—*Solid Geometry and Plane Trigonometry.*—Study of the topics covered by standard high schools. *(Second year; 4 hours.)*

SCIENCE

Professor Roemer

SCIENCE NI.—*Biology.*—Essentials of plant, animal and human biology; textbook and laboratory work. Carefully kept notebooks required. *(First year; 4 hours.)*

SCIENCE NII.— *Chemistry.*— Elementary principles of chemistry; textbook and laboratory work. Carefully kept notebooks required. *(First year; 4 hours.)*

SCIENCE NIII.—*Physics.*—Elements of physics; textbook and laboratory work. Carefully kept notebooks required. *(Second year; 4 hours.)*

SPANISH

Professor Hathaway

SPANISH NI.—*First Year.*—Pronunciation and reading aloud, dictation, conversation, forms, simple constructions, reading of easy selections. *(First year; 4 hours.)*

SPANISH NII.—*Second Year.*—Work of first year continued. Grammar, elements of syntax, exercises, dictation, conversation, reading of selections. *(Second year; 4 hours.)*

UNIVERSITY SUMMER SCHOOL

(CO-EDUCATIONAL)

June 20-August 12, 1921.
June 14-August 9, 1922.

FACULTY (1921).—A. A. Murphree, J. W. Norman, J. N. Anderson, A. P. Black, Miss Georgia Borger, L. M. Bristol, F. W. Buchholz, Miss Margaret C. Burns, W. S. Cawthon, J. M. Chapman, M. D. Cody, Miss Rose Cox, Miss Ethel Crawford, C. L. Crow, U. P. Davis, S. A. Draper, H. O. Enwall, T. C. Frye, Jos. R. Fulk, R. L. Goulding, Miss Cora Griffin, W. B. Hathaway, P. H. Hensley, R. H. Hixson, C. E. Jackson, H. C. Johnson, Albert Johnstad, B. B. Lane, J. M. Leake, T. R. Leigh, Ira McAlpin, Miss Christian McDonald, E. W. McMullen, R. G. Manchester, J. H. Marshburn, H. G. Metcalfe, Jos. Roemer, Miss Maude Saunders, W. E. Sawyer, T. M. Simpson, J. E. Turlington, George E. White, Miss Felicia Williams, J. H. Woodruff.

GENERAL STATEMENT

The University Summer School was provided for by the "Summer School Act" passed by the Legislature of 1913. It is co-educational and maintained primarily for the benefit of the teachers of the state, but other courses are offered.

The entire equipment of the University is at the service of the faculty and students. Ample provision is made for intellectual recreation and physical exercise. The Peabody Literary Society meets weekly; lectures or concerts are given frequently; the gymnasium, swimming-pool, baseball grounds, and tennis courts are at the disposition of the students, and instructors are at hand to direct athletic activities.

REGULATIONS.—To fulfill its highest mission the Summer School should not be utilized merely for the purpose of "cramming" for examinations. It is therefore hoped that all teachers will recognize the wisdom of the Summer-School Board in establishing the following regulations:

1. No teacher shall be allowed to take more than twenty hours per week of purely academic subjects.
2. No teacher shall take less than five hours per week of professional work.

The maximum number of hours per week, including professional, vocational, and academic subjects, shall, in no case, exceed twenty-seven. Two laboratory hours shall count as one hour of academic work.

CREDIT FOR WORK.—Attention is directed to the following sections of the "Summer School Act":

Sec. 5.—"All work conducted at the said Summer Schools shall be of such character as to entitle the students doing the same to collegiate, normal, or professional credit therefor, and may be applied towards making a degree."

In order to carry out the spirit of this provision, the University allows, under restrictions, a maximum of four and a half credit hours for work done at any one session of the Summer School. Attendance at three summer sessions satisfies the residence requirements for securing a Normal School Certificate or an undergraduate degree from the Teachers College. For an advanced degree four sessions are required. By combining credits gained at the Summer School with those gained in the General Extension Division of the University, it is possible for a teacher to secure a certificate or a degree without losing a prohibitive amount of time from his work. Certificates and degrees secured in this way are awarded, when so desired, on the last day of a session of the Summer School.

Sec. 6.—"All teachers attending any of the Summer Schools herein created and whose work entitles them to credit therefor, upon making proof of the same to the State Superintendent of Public Instruction, are hereby entitled to one year's extension on any Florida teacher's certificate they may hold and which has not fully expired, and such certificate may be extended one year for each succeeding session attended by the said teacher."

Certificates of credit making proof of the work done will be granted by the State Superintendent only to those teachers who attend the full term and whose work is satisfactory.

EXPENSES.—There is no charge for tuition. There is a registration fee of $2.00. Board and lodging (including lights, but not pillows, bed linen, or towels) will be offered at $5.25 per week, or $40.00 for the entire session of eight weeks; board without lodging at $4.25 per week or $32.00 per session. Children under eight years of age will not be admitted to the dormitories, but may dine with their parents in the Commons at $2.00 per week. Children between eight and ten, $2.50 per week for board; above ten, full charge. A charge of 50c will be made as a library fee. All accounts are payable in advance.

COURSES OF STUDY

The courses given during the session of 1921 were fully described in the Summer School Bulletin of that year and were, furthermore, for the most part very similar in character to the corresponding ones of the Teachers College and Normal School. In view of these facts, and inasmuch as a detailed program for the session of 1922 will be published separately, it is thought unnecessary here to make more than mere mention of the courses in question. The work offered in the Summer School of 1922 is divided into five separate and distinct groups, each serving a specific purpose:

1. REVIEW COURSES in all subjects required for county, state and special certificates.
2. PROFESSIONAL COURSES meeting the requirements for the extension of teachers' certificates without examination.
3. NORMAL COURSES leading to the normal diploma.
4. COLLEGE COURSES leading to standard college degrees of A.B. and B.S.
5. GRADUATE COURSES leading to advanced degrees.
6. HIGH SCHOOL COURSES for mature students and for those who do not have adequate high school facilities at home.

A complete catalog of all the work of the Summer School will be issued. For reservation of rooms and other information address J. W. Norman, Dean, Gainesville, Fla.

HIGH SCHOOL VISITATION

Thru Dr. Roemer, Professor of Secondary Education, the University strives to keep in close touch with the high schools of the state. Part of his time is taken up with visiting the high schools and lending such aid and encouragement as will be productive of stronger high schools and a closer connection between them and the University.

TEACHERS' EMPLOYMENT BUREAU

Teachers College and Normal School desires to serve the whole state in every possible way. For this purpose a Teachers' Employment Bureau was instituted and is open thruout the year. From school officials it receives requests for teachers. From teachers it receives requests for information as to vacancies. It files such information and tries, when called

upon, to meet the needs of both teachers and school officials. To be of greatest service it needs and invites the cooperation of superintendents, principals, and teachers. Officials needing trained men or women, and teachers desiring promotion or change, are asked to call upon the Bureau for its aid. No charges are made for services. For information, address Dr. Jos. Roemer, University of Florida, Gainesville, Florida.

DEPARTMENT OF HYGIENE

ALBERT W. SWEET, *Director*

G. C. Tillman, Physician to University.
R. G. Manchester, Director Physical Education.
W. G. Kline, Director Major Athletics.
K. D. Colson, Stenographer.
Roxie Connell, Nurse.

INSTRUCTION

HYGIENE I.—Instruction by lecture, recitation and written exercise in general and individual Hygiene. Course comprises educational, informational, defensive and constructive Hygiene, with especial reference to infectious diseases, causes, effects and prevention; sex Hygiene and social diseases; the general features concerning the destructive agents of health. Required of all first year students. *(2 hours thruout the year. Acceptable for credit for pre-medical work by the American Medical Association. Dr. Sweet.)*

HYGIENE II.—Instruction by lecture in the common groups that make up the community. Treats of the Hygiene of the family, school, industry, farm, institution, and other groups which are typical of every village or town. *(2 hours, first semester. Elective for students who have satisfied prerequisite of Hygiene I. Dr. Sweet.)*

HYGIENE III.—Instruction by lecture in the intergroup factors of community, state, nation. Treats of water supply, sewage disposal, garbage disposal, streets, infectious diseases, disinfection, fumigation, clinics and other destructive and constructive elements of community, state and national health. *(2 hours, second semester. Elective for students who have satisfied prerequisite of Hygiene I.)*

PHYSICAL EDUCATION I.—Required class work in physical exercises in the Gymnasium. Consists of exercises for general development and instruction in use of gymnasium apparatus, also minor sports. *(For Freshmen and Sophomores; 3 hours. Dr. Manchester and assistants.)*

PHYSICAL EDUCATION II.—Advanced work covering major and minor athletic activities. Includes instruction in tennis,

soccer, boxing, wrestling, swimming, and intra-mural sports and gymnasium apparatus. *(Elective for all students. Dr. Manchester and assistants.)*

PHYSICAL EDUCATION III.—Elective for students defective physically. Aims to give special and personal instruction for correction of poor physique, posture, and physical defects. *(Elective for all students. Dr. Manchester.)*

PHYSICAL EDUCATION IV.—*First aid to injured. (Elective for all students. Dr. Manchester.)*

PHYSICAL EDUCATION V.—*Major Sports.*—Instruction in methods of play of all major athletics for competition purposes; theory of major athletics. *(Hours to be arranged. Prof. Kline and assistants.)*

MEDICAL ASSISTANCE

CONSULTING CLINICIANS. — Drs. DePass, Smith, Dell, Waldo.

PHYSICAL EXAMINATION.—Regular medical examinations are offered twice yearly, and in particular cases more frequently. Opportunity is offered for individual and private conference with University Physician, Director of Department or assistants. Drs. Sweet and Tillman.

MEDICAL SERVICE.—University Physician keeps hours daily at University Infirmary for purposes of consultation. Infirmary care is provided for those requiring it. Constant bedside care is given by resident registered nurse. Dr. Tillman and Mrs. Connell.

DIVISION OF MILITARY SCIENCE AND TACTICS

RESERVE OFFICERS' TRAINING CORPS

SENIOR INFANTRY UNIT.

J. A. VAN FLEET, *Major, Infantry, U. S. Army, Commandant of Cadets and Professor of Military Science and Tactics.*

L. W. Amis, Captain, Infantry, U. S. Army;
F. H. Bain, Captain, Infantry, U. S. Army;
I. E. Ryder, Captain, Infantry, U. S. Army;
J. H. Atkinson, Captain, U. S. Army, Retired;
Assistant Professors of Military Science and Tactics.
W. Weaver, First Sergeant, U. S. Army, Retired;
D. B. Hundley, Sergeant, Infantry, U. S. Army;
E. A. Kopp, Sergeant, Infantry, U. S. Army;
Instructors, Military Science and Tactics.

AUTHORITY FOR.—The authority for the maintenance of the Reserve Officers' Training Corps will be found in the National Defense Act, June 3, 1916, as amended by the act of June 4, 1920. This act and the amended act provide for the maintenance, at colleges, of units of the Reserve Officers' Training Corps, and authorizes the Secretary of War to furnish the necessary supplies and provide a standard course of instruction.

OBJECT.—These units were authorized by Congress for the purpose of providing a corps of reserve officers to lead our augmented armed forces in time of war. The war with Germany has shown conclusively that we must depend upon college men for our additional officers. It is a part of the approved military policy of the people of the United States to maintain a small standing army. When the nation is drawn into war and large additional armed forces are raised it is necessary that they be provided with trained officers. A study of our military history shows that many lives have been sacrificed in the past because of the scarcity of officers capable of leading men in combat. The Government has attempted to rectify this by training young men in college so that if war

comes they may step into positions of leadership and acquit themselves creditably.

REGISTRATION FOR MILITARY TRAINING.—All students, except law students and students taking vocational training, will be required to register in Military Science I and II. Cards for that purpose can be obtained from the office of the Professor of Military Science and Tactics, and will be filled out and returned to the same office on day of registration. Requests for exemption in Military training may be made in proper space on card and will be acted upon by the Professor of Military Science and Tactics. Exemptions will be granted to graduate students, Juniors and Seniors who have completed the basic course, citizens of foreign countries, students taking the short courses in Agriculture of 1 year or less, the physically disqualified, and those who are more than 22 years of age at date of original entry into the University. All students so excused and who are taking a course leading to a degree must take additional academic work to compensate for the loss of credits in military training. A physical examination is given to all students in the fall of the year and exemptions on account of physical disability can only be granted as recommended by the school physicians conducting this examination.

ACCEPTED CREDITS.—Credit for work in a Reserve Officers' Training Corps unit similar to the one at the University of Florida will be given all students who present duly authenticated credentials. Those students from Senior units of the Reserve Officers' Training Corps will be given the full equivalent credit; those from Junior units, partial credit for two or more years of military training as determined by their standing in the Junior unit and their demonstrated ability. Duly authenticated credentials must be presented in every case before credits can be given.

Students from other institutions entering the Junior or Senior class without having had the requisite amount of military work, shall be required to take Military Science and Tactics for two or one year, respectively.

ORGANIZATION.—*Equipment, Camps.*—The War Department has laid out a standard course of instruction covering a period of four years. This is divided into the basic and advanced courses, each covering a period of two years.

The basic course is compulsory as outlined above, and is usually pursued during the Freshman and Sophomore years, but must be taken prior to graduation and in two consecutive years. The basic course students are issued by the War Department a complete uniform, except shoes, and necessary equipment, free of charge. A six-weeks Summer camp is optional with the course. These camps afford a fine opportunity for the student to improve his military knowledge and to engage in healthful recreation. He is surrounded by every moral safeguard and provided with every recreation and healthful amusement that a young man could wish. Chaplains look after his moral welfare and every effort is made to improve him mentally, morally, and physically. The War Department pays all expenses, including mileage, rations, medical attendance, clothing and laundry service.

Students who complete the basic course and are selected by the Professor of Military Science and Tactics and the President of the University, may elect the advanced course. Students electing this course are expected to carry it to completion as a prerequisite to graduation. Upon its completion those students recommended by the Professor of Military Science and Tactics and the President of the University, will upon their own application be offered a commission in the Infantry Reserve Corps, United States Army. Students in the advanced course are given the same allowances as the basic course students and in addition 40 cents a day. An advanced course Summer camp is compulsory usually between the Junior and Senior years. All the expenses are paid as outlined for the basic course camp and in addition one dollar a day is granted.

The War Department maintains at the University a full assortment of Army uniforms and infantry equipment, valued at over $50,000.00. Included in this equipment is a 48-piece set of band instruments. The Department is well supplied with office and class rooms, a military exhibit room, supply rooms, an indoor and outdoor gallery range, a full size modern rifle range of eight double sliding targets, excellent drill, parade, and maneuver grounds, and an open climate the year round which facilitates the practical instruction.

The Corps of Cadets at present is organized as a battalion of infantry of four companies, A, B, C, and D, and a Military

Band. Assignments to the band are made upon the recommendation of the Professor of Music, and the work substituted for part of the practical course. The Battalion Staff and Company and Band Officers are appointed from the students in the advanced course by the Professor of Military Science and Tactics, with the approval of the President of the University.

Students are required to purchase a uniform shoe of army design and to pay one dollar registration fee for the safekeeping of the uniforms and equipment, which remain the property of the United States. A supply of these shoes is kept by the University and sold at the wholesale price.

COURSE OF INSTRUCTION

INFANTRY

Basic Course

MILITARY SCIENCE I.—Freshman year, first and second semesters. Lectures, recitations, drills, calisthenics, and ceremonies. *(6 hours a week. 3 year credits. Prerequisite none.)*

The work is divided as follows:

(a) Practical.—Infantry Drill.—School of the Soldier, Squad, Platoon, and Company, and Ceremonies. Gallery and Rifle Firing. Scouting and Patrolling. Setting up exercises and Mass Play. Organization. Infantry Equipment.

(b) Theoretical.—Infantry Drill Regulation, to include The School of the Company and Ceremonies. Theory of Rifle Marksmanship. Minor Tactics, Security. Military Courtesy.

MILITARY SCIENCE II.—Sophomore year, first and second semesters. Lectures, recitations, drills, calisthenics, and ceremonies. *(6 hours a week; 3 year credits. Prerequisite: Military Science I.)*

The work is divided as follows:

(a) Practical.—Command and Leadership. Ceremonies. Setting up exercises and Mass Play. Gallery, Rifle, and Automatic Rifle Firing. Bayonet Drill. Rifle and Hand Grenades. Musketry.

(b) Theoretical.—First Aid, Military Hygiene and Sanitation. Map Reading, Topography and Military Sketching. Musketry—Theory of Fire, Target Designation and Recognition, Control of Fire.

ADVANCED COURSE

MILITARY SCIENCE III.—Junior year, first and second semesters. Elective. Lectures, recitations, Command and Leadership. *(Six hours a week; three year credits. Prerequisite: Military Science II.)*

The work is divided as follows:

(a) Practical.—Command and Leadership. Gallery, rifle, machine gun, 37 mm. gun, and Trench Mortar firing. Field Engineering.

(b) Theoretical.—Field Engineering—Defenses, obstacles, demolitions, roads, bridges. Machine Guns—Platoon drill and Mechanism, Theory of direct and indirect fire. Elements of International Law, Military Law.

MILITARY SCIENCE IV.—Senior year, first and second semesters. Elective. Lectures, recitations, Command and Leadership. *(Six hours a week; three year credits. Prerequisite: Military Science III.)*

The work is divided as follows:

(a) Practical.—Command and Leadership. Gallery, Rifle and Pistol firing. Tactical walks—Patrols, Covering Detachments, Offensive and Defensive Operations.

(b) Theoretical.—Military History and Policy of the United States. Administration. Minor Tactics.

DIVISION OF REHABILITATION

Professor Buchholz, Counselor

It is the aim of the instructors to discover and to cultivate the talent of the Rehabilitation Men and thus to prepare them to fill successfully their stations in life.

Special courses in arithmetic, reading, writing, and elementary agriculture are given to those who have not finished the common-school grades. Provision is made even for those who can neither read nor write.

COLLEGE OF AGRICULTURE

The Dean and the Counselor aid the student in selecting his studies, so that the knowledge acquired may be of the greatest practical value to him after the completion of his work at the University.

Men able to satisfy the entrance requirements may select from the courses offered in this College. Those who have completed the tenth grade, or its equivalent, are advised to enter upon the Middle Course in Agriculture (see pages 93 to 95). Deficiencies in entrance requirements may be made up in the Normal Training School and the Teachers College and Normal School.

For those who have finished the common-school branches there has been arranged the following:

Names of Courses	Nature of Work	Hours per Week	
Agricultural Education I	Library Work	1	0
Agricultural Education II	Agricultural Organizations	0	1
Agricu'l Engineering II	Farm Motors	2	0
Agronomy A	Elements of Agronomy	3	0
Agronomy B	Fertilizers	0	3
Animal Husbandry A	Elements of Animal Husbandry	3	0
Animal Husbandry B	Elements of Dairying	0	3
Bee Culture	Elements of Bee Culture	0	3
Dairying I	Dairy Products	3	0
Horticulture I	Plant Propagation	2	2
Horticulture II	Trucking	2	2
Horticulture IV	Citrus Culture	3	0
Horticulture V	Citrus Harvesting and Marketing	0	3
Horticulture VI	Insects and Diseases of Citrus Fruits	3	0
Poultry Husbandry I	Farm Poultry	0	3
Veterinary Science I	Veterinary Elements	0	3
		22	23

COLLEGE OF ENGINEERING

Vocational men able to satisfy entrance requirements may select from the courses offered in this College.

Those who have finished plane trigonometry may also enter for advanced courses and, if they wish to become candidates for a degree, may make up deficiencies in entrance requirements in the University Normal Training School.

Ambitious students who have finished the eighth grade may select from the following:*

Name of Courses	Nature of Work	†Hours per Week	
Auto Mechanics	Practical Maintenance and Repair of Motor Vehicles	3	0
Forge I*a*	Blacksmithing	3	0
Machine Shop	Use of Machine Tools	6	0
Mechanical Drawing	The Use of Ordinary Drawing Instruments	4	4
Elementary Wood Carving	Furniture Construction	0	6
Woodworking	Carpentry and Wood Turning	6	0

*A course in Commercial Telegraphy also is given.

†The first column gives the hours per week for the first semester, the second column the hours per week for the second semester.

COLLEGE OF LAW

Men who cannot satisfy the entrance requirements will be admitted as adult specials.

TEACHERS COLLEGE AND NORMAL SCHOOL

Men who can satisfy the entrance requirements may select courses preparing for teaching Agriculture, Trades and Industries, or the usual high-school subjects; others, if they have finished the eighth grade, may enter upon courses preparing for teaching in elementary schools.

GENERAL EXTENSION DIVISION

BERT CLAIR RILEY, *Director*

FACULTY.—Clara Louise Fisher, O. I. Woodley, Clifton F. Hodge, Charles F. Davis, Ella M. Allison, Mary Ellen Foley, Julia Annette Keeler, Alice L. Allison, Cedora Futch, Madelaine E. Williams, Pansy E. Manchester, J. Rex Farrior, Marion A. Hall, Eldridge Hart*, Ralph E. Callahan.

Special Lecturers and Instructors.—Edwin Earle Sparks, Meigs B. Russell, Mrs. Florence T. Cotnam, Howard Strong, Mrs. Emily Newell Blair, Lucius E. Wilson.

Regular Faculties of University of Florida and State College cooperate.

The General Extension Division carries on extension activities for the Colleges of Arts and Sciences, Education, Engineering, and Law of the University, and the College of Arts and Sciences and the Schools of Education, Physical Education, and Music of the State College for Women. The work has been divided into four departments:

I. Extension Teaching.
II. Public Welfare.
III. Instruction by Lectures and Public Discussion.
IV. General Information.

EXTENSION TEACHING

The Extension Teaching Department has been designed to give to all who cannot attend the University or College an opportunity to get instruction which may be a help and pleasure to them. This work is carried on thru (1) correspondence, (2) class, and (3) club study.

CORRESPONDENCE.—Correspondence study offers to everyone an excellent opportunity to advance in his vocation, obtain a degree, or to take courses for culture.

Review courses for teachers, high-school work for students in rural communities, college work for busy men and women, special vocational and trade courses for those who wish to advance in their line of work, and reading courses for those on the farm, in the shop, office, and home are offered. Many courses are given by the University thru the Colleges of Arts

*Summer session.

and Sciences, Education, Engineering, and Law; while special work is given in Journalism and Business. At the College for Women, the College of Arts and Sciences and the Schools of Education, Physical Culture, and Music also offer correspondence courses.

CLASS.—Wherever possible, extension classes in technical or cultural subjects will be organized. The work will be supervised by faculty members of the University or of the State College for Women.

CLUB.—Thru club-study associated groups of people are given an opportunity to study and to keep in touch with the latest thought on cultural and professional subjects. A definite plan for cooperative study under a faculty member is provided.

PUBLIC WELFARE

Thru the Public Welfare Department short courses, community institutes, conferences and surveys will be directed by the General Extension Division. Assistance will also be given to all clubs, societies, public boards, and other agencies working for the public good and community advancement.

SHORT COURSES.—Courses will be conducted at prominent places in the State for the benefit of all citizens.

COMMUNITY INSTITUTES AND CONFERENCES.—Thru conferences, commercial clubs, churches, women's clubs, parent-teachers' associations, and other organizations working toward community betterment will be brought together in order to avoid duplication of effort. Thru the community institute an opportunity will be given to make systematic investigation, to carry on necessary discussion, and to focus the attention of the whole community along the lines most needed to make the home town the best of places in which to live.

SURVEYS.—Plans are under way for conducting surveys, along lines most needed, in different parts of the State. From these, it is hoped, much valuable information will be made available.

INSTRUCTION BY LECTURES AND PUBLIC DISCUSSION

Since the mass of our citizens must get much of their instruction and information and must formulate their opinions on present-day questions concerning the community, state,

and nation thru lectures and public discussion, a lecture bureau is maintained by the Division and every effort is made to encourage people to get together in a community forum, in order that a majority decision may be reached and action may be taken.

LECTURE BUREAU.—The University offers thru this Bureau lectures by prominent citizens, faculty members, and speakers from other universities and states. These lectures are technical, informational, or inspirational in character. When ample notification is given, speakers will be furnished to women's clubs, commercial clubs, for teachers' institutes, commencement addresses, and other special occasions.

It is hoped that in another year the Division can act as a clearing-house for lecture-course talent, thus enabling communities to secure this additional feature at cost.

PUBLIC DISCUSSION BUREAU.—To assist in the development of the community forum material will be lent on current questions and present-day problems and suggestions will be given for organization and program building.

GENERAL INFORMATION AND SERVICE

In addition to disseminating the stores of information obtainable thru the faculties of the University of Florida and of the State College for Women, the General Extension Division will otherwise help individuals and communities solve their present-day problems.

Every effective means of assisting the people will be employed. Under this Department are found (1) the Bureau of Public Information, (2) the School and Community Center Bureau, (3) the Bureau of Visual Instruction, and (4) the Educational Information Bureau.

Bureau of Public Information.—This Bureau will, in answer to reasonable requests for help on any problem confronting the individual or community, act as a clearing-house for all kinds of information.

School and Community Center Bureau.—This Bureau assists citizens and organizations who realize the value and necessity of developing the school house or some other central place of meeting as a Community Center and of offering the proper kind of play and recreation for children of all ages as well as adults.

The services of a specialist for advice on public recreation and play-ground equipment is offered free to interested communities and teachers and others are given every necessary help in becoming local leaders.

Aid is given in putting on community programs. Plays, recitations and pageants are lent to societies, clubs and schools. Leaders are also lent books on new games and story books for children of all grades. Teachers are furnished educational magazines of value to them in their profession. Talking machine records in sets making up complete programs, accompanied by lecture material, will be furnished to farmers' clubs, women's organizations, churches and schools.

Visual Instruction Bureau.—Instruction thru the medium of the eye is known to be one of the most effective ways of reaching many people; therefore, by cooperating with the large corporations, bureaus, and departments of the United States Government, the General Extension Division can supply clubs, schools, and communities with slides and motion-picture reels for instruction and entertainment. Lecture outlines accompany the slides.

Educational Information Bureau.—Thru this Bureau questions concerning school problems will be answered and special effort will be made to render service to officials seeking information on school buildings and equipment by furnishing data concerning work done and results obtained by the various communities in the State. The Bureau will not make suggestions, but will act merely as a clearing-house for information furnished by the schoolmen of the State for the benefit of others.

Address all communications to the Director, General Extension Division, University of Florida.

REGISTER

DEGREES AND CERTIFICATES

JUNE 7, 1921

HONORIS CAUSA

Doctor of Laws

Philip Keys Yonge, M.A., LL.B., Phi Beta Kappa (University of Georgia)....President Southern States Lumber Co., Pensacola, Fla.

IN COURSE

Bachelor of Arts

Carpenter, Archer Eugene....Orlando, Fla.
Coxe, Curtis Carlisle....St. Augustine, Fla.
Johnson, Clifton Drew....Clearwater, Fla.

Bachelor of Laws

Adams, Alto Lee....DeFuniak Springs, Fla.
Edrehi, Joseph Montrose....Pensacola, Fla.
Franklin, James Alfred....Jacksonville, Fla.
Hardee, Charles Jay....Madison, Fla.
Liddon, John Walker....Marianna, Fla.
Madison, William McKee....Jacksonville, Fla.
Mellor, Frederick Mellor....Jacksonville, Fla.
Norton, Oscar Harris....Tampa, Fla.
Peacock, Samuel Clarence....Tampa, Fla.
Quinan, Edward Botsford....Miami, Fla.
Savage, Charles Augustus, Jr....Ocala, Fla.
Vining, Edward Clyde....Wildwood, Fla.

Bachelor of Science

Friedlander, Herbert Melton....Indian Rocks, Fla.
Gill, Burgo Doyle....Jacksonville, Fla.
Matlack, Marion Brooks....Sorrento, Fla.
Merchant, Harry McCreary....Gainesville, Fla.
Otto, Thomas Osgood....Key West, Fla.
Weedon, Frederick Renfroe....Gainesville, Fla.

Bachelor of Science in Agriculture

Bishop, Albert Kent....Eustis, Fla.
Christiance, DeForest Lewis....Cocoanut Grove, Fla.
Gunn, June Rawls....Gainesville, Fla.
Hueck, Carl Peter....Vero, Fla.
Mahoney, William Henry....Leesburg, Fla.
Wells, William Greene....City Point, Fla.
Williams, Leslie Dodd....Evansville, Ind.

Bachelor of Science in Agricultural Education

Bratley, Homer Eells....Miami, Fla.
Driggers, Ray Ludford....Fort Green, Fla.
Gunn, June Rawls....Gainesville, Fla.
Hamilton, Henry Glenn....Humboldt, Tenn.

Bachelor of Science in Education

Cason, Shafter Woodford....Otter Creek, Fla.

Bachelor of Science in Chemical Engineering

Ford, Herbert Giddens....Tampa, Fla.

Bachelor of Science in Civil Engineering

Hartman, George William....Pensacola, Fla.
Huff, Van Ellis....Miami, Fla.
McKey, Wallace Alexander....Plant City, Fla.
Moorhead, James Robert, Jr....Ocala, Fla.
Sampaio Leite, José de....Sao Paulo, Brazil
Watkins, Joseph Nielson....Key West, Fla.

Bachelor of Science in Electrical Engineering

Hubbard, McCoy.....Terra Ceia, Fla.
Knight, Damill Burnett.....Bunnell, Fla.
Tatom, Louis Jeter.....Pensacola, Fla.

Graduate in Farming

Anderson, Charles Parke.....Ben Avon, Penna.
Link, Harold Henry.....Orlando, Fla.
Mackinnon, Francis Tillinghast.....Marianna, Fla.

One Year Course in Agriculture

Crews, Stafford Lang.....Lake Butler, Fla.
Milliken, Faunt LeRoy Senour.....Tampa, Fla.
Miro, Carlos Arturo.....David, Chiriqui, Panama
Skornschek, Frank Joseph.....Pineland, Fla.

Normal Diploma

Simmons, Glenn Ballard.....Ponce De Leon, Fla.

AUGUST 12, 1921

Master of Arts in Education

Beeson, Edward Lee.....Sarasota, Fla.
McArthur, Gertrude.....Gholson, Miss.

Bachelor of Arts in Education

Donaldson, Malcolm Gilbert.....Shady Grove, Fla.
Hubbell, Julia Bee.....Bradentown, Fla.
McKay, Katherine Elizabeth.....Sanford, Fla.

Bachelor of Arts in Agricultural Education

Nichols, Cecil Howard.....Pinellas, Fla.
Pope, Charles Edward.....Starke, Fla.

Bachelor of Science

Cates, William Hayward.....Tallahassee, Fla.

Bachelor of Science in Agriculture

Tan, Len Bo.....Canton, China

Normal Diploma

Bullock, William Jennings.....Arcadia, Fla.
Carleton, Boyd.....Gainesville, Fla.
Graham, George Ransom.....Fort White, Fla.
Hamon, Ray Laforest.....Homestead, Fla.
Harris, Nannie Davis.....Winter Park, Fla.
Kennan, Thomas Floyd.....Hilliard, Fla.
Peaden, Porter Lee.....Red Rock, Fla.
Peeples, Lorace Helen.....Bowling Green, Fla.
Tiller, Virginia.....Kissimmee, Fla.

AS OF AUGUST 6, 1920

Bachelor of Science

Bache, Harold Franklin.....Chattahoochee, Fla.

JUNE 7, 1921

Commissions as Second Lieutenant, Infantry, U. S. A. R. C.

Copeland, Goodrich Russell.....St. Petersburg, Fla.
Gleason, William Lansing.....Eau Gallie, Fla.
Hubbard, McCoy.....Terra Ceia, Fla.
Knight, Damill Burnett.....Bunnell, Fla.
McKey, Wallace Alexander.....Plant City, Fla.
Mahoney, William Henry.....Leesburg, Fla.
Quinan, Edward Botsford.....Miami, Fla.
Tatom, Louis Jeter.....Pensacola, Fla.
Wells, William Greene.....City Point, Fla.

Certificates in Lieu of Commissions

Christiance, DeForest Lewis, Jr.....Cocoanut Grove, Fla.
Friedlander, Herbert Milton.....Indian Rocks, Fla.

SENIORS ELECTED TO PHI KAPPA PHI HONOR SOCIETY APRIL, 1922

Lee Hampton Ball.....A.B.
Albert Reed Caro.....LL.B.
John Hardin Carter, Jr.....LL.B.
Robert Foster Chatham.....B.S.A.
Arthur Crago.....B.S.
Lemuel Curtis Crofton.....J.D.
William Lansing Gleason.....LL.B.
Eldridge Franklin McLane.....A.B.Ed.
James Velma Keen.....LL.B.
Carl Temple Link.....B.S.A.
William Harry McBride.....B.S.A.
Eldridge Franklin McLane.....A.B.Ed.
Herbert Stockton Massey.....B.S.
George Walton Milan.....A.B.
Russell Paul Redman.....B.S.E.
Arthur Neyle Sollee.....B.S.C.E.
Royall Perkins Terry.....J.D.
Joel Reaves Wells, Jr.....A.B.Ed.
DeWitt Everett Williams.....B.S.Ed.
Walter Scott Yates.....B.S.A.E.

CHARTER MEMBERS AND STUDENT ELECTED TO THE GAMMA SIGMA EPSILON HONOR FRATERNITY

Orville Marion Berg.....Charter member, College of Arts and Sciences
Arthur Crago.....Charter member, College of Arts and Sciences
Herbert Stockton Massey.....Charter member, College of Arts and Sciences
Charles Edgar Morgan.....Charter member, College of Arts and Sciences
Ralph Parker Perkins.....Charter member, College of Arts and Sciences
Karl William Swartz.....Charter member, College of Arts and Sciences
Frederick Renfroe Weedon.....Charter member, College of Arts and Sciences
DeWitt Everett Williams.....Charter member.....Teachers' College
Richard Temple Burr.....Elected.....College of Agriculture
Henry Fuller.....Elected.....College of Arts and Sciences
John Nerndon Hansborough.....Elected.....College of Agriculture
Charles Roy Hauser.....Elected.....College of Engineering
Donald Hubbard.....Elected.....College of Engineering
Horace Clare Moul.....Elected.....College of Engineering
Richard M. Smith.....Elected.....College of Agriculture

MEDALS AND PRIZES

Declaimer's Medal.....W. D. Etheridge
Junior Orator's Medal.....T. D. Sale, Jr.
Senior Orator's Medal.....H. M. Friedlander
Faculty Loving Cup.....Agricultural Club
Track Trophy.....W. McK. Madison
Most Efficient Officer.....First Lieut. D. E. Williams, Co. D
Best Drilled Man.....Sergt. A. C. Cooper, Co. D

ROLL OF STUDENTS

1921-1922

The abbreviations used are: A.B. and B.S., College of Arts and Sciences; Ag., College of Agriculture; Ag. 4-mo., 1-yr., or 2-yr., Four Months, One-Year, or Two-Year Course, respectively, in Agriculture; E, College of Engineering; Grad., Graduate School; L., College of Law; N., Normal School; Pre-Med., Pre-Medical Course; Sp., Special Student; T., Teachers College; V., Federal Vocational Student; El., Elementary Student.

The numerals indicate the class (1, Freshman; 2, Sophomore; 3, Junior; 4, Senior) except after L., where it denotes the number of years the student has been enrolled in the College of Law.

Name	*Classification*	*Postoffice*	*County or State*
Abbott. Charles E.	Ag. 2	Fort Green	DeSoto
Abbott, Fred P.	Ag. 2, L. 1	Detroit	Michigan
Adams, Charley G.	Ag. V.	Holt	Okaloosa
Aguilera, Leopoldo S.	Ag. 1-yr.	Habana	Cuba
Albritton, Carl B.	Ag. 1-yr.	Sarasota	Sarasota
Alderman, James M.	L. 3	Bradentown	Manatee
Alderman, Ray O.	B.S. 1	Tarpon Springs	Pinellas
Aldridge, John F.	El. V.	Noma	Holmes
Alexander, Jake S.	Ag. 1	Tampa	Hillsborough
Allen, John E.	El. V.	Tampa	Hillsborough
Allen, Julius A.	A.B. 1	Jacksonville	Duval
Almond, John D., Jr.	E. Sp.	Fort Pierce	Saint Lucie
Ames, Alvin A.	A.B. 2	St. Petersburg	Pinellas
Ames, Burton W.	Ag. 3	Kissimmee	Osceola
Anderson, Claude	Pre-Med. 2	Orlando	Orange
Anderson, Cromwell A.	L. 2	Palatka	Putnam
Anderson, Ewing	A.B. 1	Gainesville	Alachua
Anderson, James N., Jr.	A.B. 1	Gainesville	Alachua
Anderson, W. Burt	A.B. 1	Inverness	Citrus
Andrews, Chester N.	Ag. V.	Pensacola	Escambia
Arnold, William P.	Ag. V.	Caro	Georgia
Ashmore, Jack P.	Pre-Med. 1	Ben Haden	Wakulla
Atanasoff, John V.	E. 1	Brewster	Polk
Atkisson, Curtis T.	B.S. 1	Crescent City	Putnam
Atkisson, Robert D.	E. 4	Crescent City	Putnam
Avera, John B.	Pre-Med. 2	Gainesville	Alachua
Babson, John C.	E. 2	Atlantic Beach	Duval
Baker, James D.	B.S. 1	Vero	Saint Lucie
Baker, Milledge A.	Ag. 2-yr.	O'Brien	Suwanee
Ball, Lee H.	A.B. 4	Tampa	Hillsborough
Bange, Fred P.	A.S. Sp.	Jacksonville	Duval
Barber, George C.	A.B. 1	Sanford	Seminole
Barnes, Elmer M.	L. 1	Winter Haven	Polk
Barnes, James	El. V.	Pensacola	Escambia
Barnhill, William B.	Ag. V.	Baker	Okaloosa
Barr, John W.	B.S. 1	Micanopy	Alachua
Barrow. Walker G.	Ag. V.	Crestview	Okaloosa
Barrs, J. Murdock	A.B. 1, L. 1	Jacksonville	Duval
Bartlett, Neill B.	E. Sp.	Saint Cloud	Osceola
Bartlett, William A.	E. 1	Tampa	Hillsborough
Batchelder, Ivan C.	E. 1	Saint Petersburg	Pinellas
Baya, George J.	L. 2	Jacksonville	Duval
Beach, Austin O.	N. 1	Hastings	Saint Johns
Bearss, Clyde I.	E. 2	Tampa	Hillsborough
Beasley, Augustine E.	L. 1	Starke	Bradford
Beaty, Edward P.	E. 1	Jennings	Hamilton
Bee, Gerald H.	A.B. 1	Sebring	Highlands
Bellinger, William H.	Pre-Med. 1	Monticello	Jefferson

Name	Classification	Postoffice	County or State
Benefield, Earney	Ag. V.	Milltown	Georgia
Benjamin, Laurence E.	E. Sp.	Gainesville	Alachua
Bennett, Eulice	El. V.	Jacksonville	Duval
Bentley, E. Ellis	E. 1.	Orange Park	Clay
Berg, Orville M.	B.S. 3.	Arcadia	DeSoto
Beugnot, John T.	El. V.	Sebastian	Saint Lucie
Bie, Osmonde R.	L. 1.	Tampa	Hillsborough
Bishop, George L.	El. V.	Pensacola	Escambia
Bishop, Joseph E.	El. V.	Summertown	Georgia
Bivens, William J.	L. 3.	Tampa	Hillsborough
Bize, John T.	A.S. Sp.	Tampa	Hillsborough
Black, Arthur K.	Pre-Med. 1.	Lakeland	Polk
Blaha, Lloyd J.	El. V.	Gainesville	Alachua
Blake, Edgar S.	E. Sp.	Chipley	Washington
Blake, Hawley D.	B.S. 1.	Tampa	Hillsborough
Blake, Julian A.	L. 2.	Jacksonville	Duval
Blume, J. Victor	Ag. 4.	Live Oak	Suwanee
Blatt, John F. Jr.	E. Sp.	Kankakee	Illinois
Bobbitt, Pierce	Ag. V.	Aberdeen	North Carolina
Bogue, Lincoln C.	B.S. 1.	Saint Petersburg	Pinellas
Bohrer, Jack	A.B. 2.	Tampa	Hillsborough
Bolles, Paul K.	L. 2.	Oldsmar	Hillsborough
Booth, David E.	E. 2.	Saint Petersburg	Pinellas
Booth, William F.	Ag. V.	Audubon	Brevard
Booth, William L.	El. V.	Millville	Bay
Boring, Elmer W.	L. 3.	Waldo	Alachua
Bosman, Harold A.	Ag. 2.	Jacksonville	Duval
Bostwick, William M.	E. 3.	Jacksonville	Duval
Boswell, Eric R.	E. 4.	Inverness	Citrus
Bouchelle, Louis B.	A.B. 1.	New Smyrna	Volusia
Boulware, Robert M.	B.S. 1.	Lakeland	Polk
Bowen, Floyd B.	A.B. 1.	Chipley	Washington
Bowen, Reeves	A.B. 3.	Chipley	Washington
Bowyer, Egbert N.	L. 2.	Lakeland	Polk
Boyatt, Francis M.	Ag. V.	Oneida	Tennessee
Boyd, Chas. Fort	A.B. 1.	Jacksonville	Duval
Boyd, Chas. Wilson	B.S. 2.	Jacksonville	Duval
Boyd, James R. Jr.	L. 1.	Jacksonville	Duval
Boyd, John B.	Pre-Med. 1.	Orlando	Orange
Boyd, Thomas M.	Ag. 2-yr.	Eagle Lake	Polk
Bracken, Howard M.	Ag. 2-yr.	Gainesville	Alachua
Braddock, Elbert C.	Ag. V.	Crescent City	Putnam
Braddock, Heyward M.	E. 2.	Crescent City	Putnam
Bradshaw, Virgil M.	B.S. 3.	San Antonio	Pasco
Brash, Victor G.	E. 2.	Tampa	Hillsborough
Bratley, Cyril O.	Ag. 1.	Buena Vista	Dade
Bridges, Wallace T.	Ag. V.	Groveland	Lake
Brinson, Paul H.	L. 1.	Ocala	Marion
Britt, Jesse B.	Ag. V.	Gainesville	Alachua
Brittain, Kingman M.	B.S. 1.	Jacksonville	Duval
Brobston, William E.	L. 1.	Ortega	Duval
Brock, Lee E.	Ag. V.	Chipley	Washington
Brown, Asa D.	B.S. 1.	Lynn Haven	Bay
Brown, Carl L.	A.B. 2.	Lake Butler	Union
Brown, Cornelius J.	Ag. V.	Bluff Springs	Escambia
Brown, H. Clifton	B.S. 2.	Lawtey	Bradford
Brown, James F.	El. V.	Fairfield	Marion
Brown, Jesse C.	Ag. V.	Gainesville	Alachua

Name	Classification	Postoffice	County or State
Brown, Thomas N.	Ag. Sp.	Webster	Sumter
Brumby, Robert H.	Ag. 2	Gainesville	Alachua
Brumby, Will M.	Ag. Sp.	Gainesville	Alachua
Bryson, Willis B.	E. 2	Live Oak	Suwanee
Buckley, Rolf K.	Ag. 1	Palatka	Putnam
Buie, Alec C.	A.B. 2	Gainesville	Alachua
Buie, William Z.	El. V.	Stocktonia	Saint Johns
Bullock, William J.	T. 3	Nocatee	DeSoto
Bunch, George L. Jr.	E. 1	Pavo	Georgia
Bunnell, Maurice F.	E. 3	Orlando	Orange
Burnett, Richard H.	Ag. 2-yr.	Jacksonville	Duval
Burr, Richard T.	Ag. 3	Arch Creek	Dade
Busbee, Edgar B.	A.B. 2	Williston	Levy
Busbee, Harley M.	Ag. V.	Laurel Hill	Okaloosa
Butler, Edward B.	El. V.	Zolfo	DeSoto
Butler, Hiram S.	Ag. V.	Shelton	Dixie
Butler, Leo M.	E. 2	Clearwater	Pinellas
Butts, Joseph S.	B.S. 1	Dade City	Pasco
Byrd, Calhoun Y.	L. 2	Live Oak	Suwanee
Byrd, John C.	L. 1	Jacksonville	Duval
Cade, John J.	B.S. 1	Seville	Volusia
Calhoun, George A.	E. 3	Pensacola	Escambia
Campbell, Francis D.	A.B. 1	Chipley	Washington
Campbell, Herbert G.	El. V.	Safety Harbor	Pinellas
Campbell, Morris T.	Ag. 1	Largo	Pinellas
Cannon, Job B.	L. Sp.	Palatka	Putnam
Canter, Joseph M.	Pre-Med. 1	Lynnville	Kentucky
Carbonall, Cecil E.	L. Sp.	Key West	Monroe
Cargell, Robt. M.	Pre-Med. 1	St. Petersburg	Pinellas
Carlton, Robt. A.	Ag. 3	Knights	Hillsborough
Carlton, Thomas M.	Pre-Med. 1	Wauchula	Hardee
Carlton, Tullie H.	L. 3	Gainesville	Alachua
Carn, Marshall N.	A.S. Sp.	Ocala	Marion
Caro, Albert R.	L. 3	Pensacola	Escambia
Caro, Philip M.	E. 1	Pensacola	Escambia
Carpenter, A. Eugene	L. 3	Orlando	Orange
Carruth, Melville W.	T. 2	Tampa	Hillsborough
Carter, Egerton E.	B.S. 1, N. 2	Vero	St. Lucie
Carter, John H., Jr.	L. 3	Marianna	Jackson
Case, Lawrence C.	L. 1	St. Augustine	St. Johns
Cassels, Wm. M.	Ag. V.	Bay Lake	Marion
Cassens, Rudolph F.	B.S. 1	Ft. Pierce	St. Lucie
Cassida, Neil C.	Ag. V.	Portland	Walton
Caton, Harry O.	Ag. V.	Gainesville	Alachua
Catts, Sidney J., Jr.	L. 3	Gainesville	Alachua
Cavender, Homer L.	E. Sp.	Charleston	West Virginia
Chadwick, A. Winnard, Jr.	L. 2	St. Augustine	St. Johns
Chaffin, Jeff	Grad.	Gainesville	Alachua
Champlin, Ralph	N. 2	Jacksonville	Duval
Charbonneau, Fernan C.	Ag. Sp.	Haines City	Polk
Chatham, R. Foster	Ag. 4	Arcadia	DeSoto
Chellberg, David G.	Ag. V.	Worchester	Massachusetts
Chesnut, John	Ag. Sp.	Gainesville	Alachua
Chillingworth, Richard C.	A.B. 1	West Palm Beach	Palm Beach
Chitty, Howell B.	A.B. 1	Caryville	Washington
Christy. Harold K.	L. 1	Irving	New York
Clapp, Eldridge A.	Ag. 2-yr.	New Rochelle	New York
Clark, Charles E.	A.B. 1	Jacksonville	Duval

Name	Classification	Postoffice	County or State
Clark, Chris L.	A.B. 1	Port Tampa	Hillsborough
Clark, James P.	L. 1	St. Petersburg	Pinellas
Clark, Joseph S.	L. 3	Gainesville	Alachua
Clark, Robt. W.	B.S. 1	Wall Springs	Pinellas
Clark, Thomas L.	A.B. 1	Monticello	Jefferson
Clark, Wm. B.	T. 1	Blountstown	Calhoun
Clegg, George R.	T. 1	Inverness	Citrus
Cleland, Clarence R.	Ag. V.	Savannah	Georgia
Clonts, Arthur R.	L. 1	Lakeland	Polk
Clower, Clifford	El. V.	Brownsville	Texas
Clyatt, Orlando S., Jr.	Pre-Med. 1, L. 1	Trenton	Alachua
Coachman, Wm. M.	Ag. V.	Miami Beach	Dade
Cobb, John H.	Ag. V.	Kissimmee	Osceola
Cobb, Lawrence H.	E. 2	Milton	Santa Rosa
Cobb, Otis M.	L. 1	Sanford	Seminole
Cody, Willis J.	B.S. 3	Crooked Lake	Polk
Coe, Albert B.	E. 1	Miami	Dade
Coe, Arthur R.	E. Sp.	Miami	Dade
Cohen, Murray	A.B. 3	Miami	Dade
Coleman, Geo. D.	Ag. V.	Lisbon	Lake
Collins, Crenshaw C.	Ag. 2.	Bartow	Polk
Collins, Robt. T.	Ag. 2-yr.	Umatilla	Lake
Comerford, Wesley P.	Ag. V.	Cypress	Jackson
Conant, Donald E.	E. 2.	Lakeland	Polk
Conkling, Chas. M.	B.S. 1	Melbourne	Brevard
Connell, H. Louis	E. 1	Inverness	Citrus
Connell, J. Milton	E. 1	Inverness	Citrus
Conner, Francis E.	L. Sp.	Gainesville	Alachua
Conroy, Francis P.	A.B. 1	Jacksonville	Duval
Cook, Chas. E.	E. 3	Newberry	Alachua
Cooper, Chas. E.	El. V.	Key West	Monroe
Cooper, Nelson D.	E. 4	Jacksonville	Duval
Cooper, Ruby F.	T. 4	Gainesville	Alachua
Copp, George J.	Ag. V.	Melrose	Massachusetts
Corley, H. Bartley	B.S. 1	Leesburg	Lake
Cotter, Walter H.	B.S. Sp.	Tampa	Hillsborough
Cox, J. O'Neal	A.B. 3	Gainesville	Alachua
Coxetter, Geo. D.	Ag. 2-yr.	Lloyd	Jefferson
Crago, Arthur	B.S. 4	Ocala	Marion
Cramer, Henry F.	N. 1	Ocala	Marion
Crandall, Asbury H.	L. 1	Buffalo	New York
Crane, Dwight W.	B.S. 1	Jacksonville	Duval
Crawford, Hugh L., Jr.	Pre-Med. 1	Jacksonville	Duval
Creary, Harry L.	L. 1	Gainesville	Alachua
Creary, Lewis G.	E. 1	Pensacola	Escambia
Crews, Fred L.	Ag. V.	Ocala	Marion
Crews, Wm. A.	Ag. V.	Gainesville	Alachua
Crippen, Herbert O., Jr.	L. 2	Jacksonville	Duval
Crofton, Lemuel C.	L. 3	Chipley	Washington
Crom, Frank R.	N. 1	Gainesville	Alachua
Crowley, Wm. J.	Ag. 1	Miakka	Sarasota
Crown, Raymond M.	Ag. 1	Gainesville	Alachua
Curtis, Gilbert	E. 4	Tampa	Hillsborough
Daniels, Coley	Ag. V.	Kinard	Calhoun
Daniels, J. Palace	Pre-Med. 1	Pensacola	Escambia
Danison, Robert	E. 2	St. Petersburg	Pinellas
Davies, Clyde T.	A.B. 2	Bowling Green	Virginia
Davis, Jack A.	B.S. 1	Quincy	Gadsden
Davis, Jas. R.	Ag. V.	Baker	Oakloosa

Name	Classification	Postoffice	County or State
Davis, Laurence W.	E. 2	Mulberry	Polk
Davis, Orville R.	Ag. 2	Miami	Dade
Davis, Robert W.	Ag. V.	DeFuniak Springs	Walton
Davis, Wm. M.	Ag. 2	Wauchula	Hardee
Davis, Wm. T.	L. 1	Madison	Madison
Dean, Sanford	Ag. V.	Bonifay	Holmes
Dehon, Arthur L.	Pre-Med. 1	St. Petersburg	Pinellas
Dees, Cleveland	Ag. V.	Old Town	Dixie
Delegal, Waver E.	Ag. V.	Live Oak	Suwanee
Denson, Reuben H.	Ag. V.	Albany	Georgia
Dettre, Rexford H.	Ag. V.	Bradentown	Manatee
Deuber, Arthur L.	Pre-Med. 1	Tampa	Hillsborough
DeVane, LeRoy M.	Ag. 2-yr.	Jennings	Hamilton
DeWolf, Anson B.	E. 4	Crescent City	Putnam
Dickey, Jos. B.	E. 1	Auburndale	Polk
Dickson, Ray C.	T. Sp.	Gainesville	Alachua
Disbennett, D. Irwin	E. 1	New Smyrna	Volusia
Dodson, Charles L.	T. 1	Gainesville	Alachua
Doty, A. E.	Pre-Med. 2	Gainesville	Alachua
Dowdell, Richard S.	Ag. & T. 3	Wimauma	Hillsborough
Drake, Charles W.	L. 1	Ft. Lauderdale	Broward
Driggers, Vaugh W.	Ag. 1	Ft. Green	Hardee
DuBois, Wm. H.	A.B. 1	Ocean City	New Jersey
Duckworth, Robt. E.	A.B. 4	Orlando	Orange
Duke, George F.	Ag. 2	Gainesville	Alachua
Duncan, Chas. E.	L. 2	Tavares	Lake
Duncan, Ferdinand H.	L. 1	Gainesville	Alachua
Duncan, Kasper G.	T. 3	Lake Butler	Union
Dunk, Herbert B.	A.S. Sp.	Jacksonville	Duval
Dunning, Melton C.	Ag. V.	Gainesville	Alachua
Dupont, Louis E.	Ag. 2	Daytona	Volusia
Duren, Robt. H.	Pre-Med. 1	Brooksville	Hernando
Durst, Bernard K.	E. 2	Gainesville	Alachua
Dutton, Albert W.	L. Sp., Ag. 1-yr.	Everett	Massachusetts
Dyer, Borden M.	B.S. 1	West Palm Beach	Palm Beach
Dyer, Wm. J.	Ag. 4	West Palm Beach	Palm Beach
Dyson, Walter C.	Ag. V.	Miami	Dade
Earnest, Chas. H.	B.S. 1	Palatka	Putnam
Earnest, Robt. L., Jr.	A.B. 4, L. 1	Palatka	Putnam
Ebinger, Rollin J.	T. 2	Tampa	Hillsborough
Eddy, Byron L.	E. 1	Tampa	Hillsborough
Edminster, Chas. L.	L. 1	St. Augustine	St. Johns
Edmunds, Henry R.	Ag. 4	Farmville	Virginia
Elwards, Henry B.	Ag. 4-mo.	Milton	Massachusetts
Edwards, Henry L.	B.S. 3	Kissimmee	Osceola
Edwards, Thos. J., Jr.	B.S. 1	Chattahoochee	Gadsden
Eggleston, Geo. S.	El. V.	Brooklyn	New York
Ekeland, Leif T.	Pre-Med. 2	Lake Wales	Polk
Ellis, Elgar P.	L. 1	Ft. White	Columbia
Ellsworth, Lloyd H.	Ag. 4	Dade City	Pasco
Elmore, Franklin H.	A.B. 1	Jacksonville	Duval
Emerson, J. Rutledge	Pre-Med. 1	Gainesville	Alachua
Emmert, Paul	L. 1	Bradentown	Manatee
Engle, Frederick W.	Ag. 2-yr.	Lake City	Columbia
Ennis, John G.	E. 2	Tampa	Hillsborough
Entz, Allan L.	A.B. 1	Leesburg	Lake
Etheredge, Jas. T.	E. 1	DeSoto City	Highlands
Etheridge, Walter D.	L. 2	Tavares	Lake
Etzler, Robt. D.	Ag. 1	Tampa	Hillsborough

Name	Classification	Postoffice	County or State
Evans, Wm. F.	L. 1	Jacksonville	Duval
Fahs, John L.	A.B. 1	Leesburg	Lake
Farnsworth, Francis W.	A.S. Sp.	Tampa	Hillsborough
Farr, Earl D.	L. 2	Wauchula	Hardee
Farrior, J. Rex	L. 1	Chipley	Washington
Ferguson, Thos. S.	L. 1	Lake City	Columbia
Ferguson, Wm. B.	El. V.	Daytona	Volusia
Fernald, Horace J.	Ag. V.	Melrose	Massachusetts
Ferris, G. Floyd	E. 2	Jacksonville	Duval
Field, Clarence E.	E. 2	Southport	North Carolina
Field, Jos. I.	A.B. 1	Southport	North Carolina
Fielding, Wm. S.	L. 2	Anthony	Marion
Finnman, Ben J.	E. 1	Tampa	Hillsborough
Fleming, Edward E.	L. 3	Milton	Santa Rosa
Fletcher, Jas. C., Jr.	N. 1	Live Oak	Suwanee
Flood, Samuel F., Jr.	E. Sp., L. 1	Jacksonville	Duval
Flowers, Wm. R.	N. 1	Milton	Santa Rosa
Fontaine, Henry M.	El. V.	Brandon	Hillsborough
Ford, George P.	B.S. 1	Lakeland	Polk
Ford, Roger F.	L. 1	Lakeland	Polk
Foster, Henry B.	E. 1, N. 2	Monticello	Jefferson
Fox, Edgar V.	E. 2	Piedmont	Orange
Foy, Eugene T.	Pre-Med. 1	St. Augustine	St. Johns
Fraleigh, Albert E.	A.B. 3	Madison	Madison
Franklin, Paul G.	E. 3	Ft. Myers	Lee
Freedlund, Jos. I.	E. 2	Miami	Dade
French, Walter F.	Pre-Med. 2	St. Cloud	Osceola
Friedman, Jacob W.	E. 2	Pensacola	Escambia
Fuller, Arnold H.	T. 1	New Smyrna	Volusia
Fuller, Henry	B.S. 3	Tampa	Hillsborough
Fuller, Landon	E. 3	Tampa	Hillsborough
Fussell, Carroll W.	A.B. 3	Webster	Sumter
Fyler, Lawrence M.	Ag. V.	Orlando	Orange
Gaines, Benj. F.	Grad.	Gainesville	Alachua
Gabriell, Kenneth R.	B.S. 1	Jacksonville	Duval
Garner, Jack	Ag. V.	New Smyrna	Volusia
Garren, J. W.	El. V.	St. Petersburg	Pinellas
Gaskill, John E.	Ag. 1-yr.	Tampa	Hillsborough
Gaskin, Shelby G.	L. 1	Blountstown	Calhoun
Gaston, Ernest S.	N. 1	Pinemount	Suwanee
Geiger, Albert J.	Ag. 3	Homestead	Polk
Geralds, Jesse T.	Ag. V.	Horse Cave	Kentucky
Gibson, Daniel M.	El. V.	Molino	Escambia
Gifford, Horace H.	A.B. 1	Vero	Saint Lucie
Gifford, Wilbur H.	A.B. 1	St. Petersburg	Pinellas
Gill, Elam E.	Ag. V.	Verna	Manatee
Gillen, Patrick H.	B.S. 2	Ocala	Marion
Gillis, Alexander A.	E. 3	Ponce de Leon	Holmes
Givens, Robert H.	A.B. 1	Key West	Monroe
Givens, Val W.	El. V.	Laurel Hill	Okaloosa
Gleason, Charles I.	L. Sp., A.S. Sp.	St. Augustine	St. Johns
Gleason, William L.	L. 3	Eau Gallie	Brevard
Glickstein, Max S.	E. 1	Jacksonville	Duval
Godbold, John C.	Ag. 1	Tallahassee	Leon
Goggans, Joseph N.	E. 1	Orlando	Orange
Gomez, Rogelio	L. 1	Key West	Monroe
Graham, Angus W.	E. 2	Sebring	Highlands
Granat, Roland W.	L. 1	Miami Beach	Dade
Graves, Donald G.	E. 1	St. Petersburg	Pinellas

Name	Classification	Postoffice	County or State
Graves, Walter F., Jr.	A.B. 2	Quincy	Gadsden
Gray, George W.	L. 3	Orlando	Orange
Gray, Henry L., Jr.	L. 1	Gainesville	Alachua
Gray, Hillary C.	El. V.	Commo	North Carolina
Green, C. S.	L. Sp.	Pomona	Putnam
Green, Edward B.	L. 3	Ocala	Marion
Green, Osward	El. V.	Brunswick	Georgia
Green, Otis T.	L. 1	Ocala	Marion
Green, Truman P.	A.B. 3	Tampa	Hillsborough
Gribble, James H.	Ag. 2-yr.	Arch Creek	Dade
Griffin, George L.	Ag. V.	Auburndale	Polk
Griffin, William N.	Ag. V.	Chipley	Washington
Griffis, Henry E.	Ag. V.	Starke	Bradford
Gugluizza, David R.	Ag. V.	Pittsburgh	Pennsylvania
Gunn, Erit F.	E. 3	Jacksonville	Duval
Gunn, W. Walter	E. Sp.	Gainesville	Alachua
Guthrie, Milford	Ag. V.	Green Cove Springs	Clay
Guyton, Moses	Pre-Med. 1	Marianna	Jackson
Hackney. Esten L.	B.S. 2	Safety Harbor	Pinellas
Hadlow, Frank N.	E. 3	Jacksonville	Duval
Hadsock, Frank F.	Ag. V.	Green Cove Springs	Clay
Hagan, Denton H.	El. V.	Trenton	Alachua
Hait, Kenneth B.	T. 2	Lynn Haven	Bay
Hall, John F.	L. 3	Tallahassee	Leon
Hall, John L., Jr.	B.S. 1	Jacksonville	Duval
Hall, Robert L.	B.S. 2	Pahokee	Palm Beach
Hall, Williams R.	B.S. 1	Ocala	Marion
Hamilton, Henry G.	Grad.	Gainesville	Alachua
Hamilton, G. Creary	T. 4	Pace	Santa Rosa
Hammar, Harald E.	Ag. 1	Sebring	Highlands
Hamon, Ray L.	T. 4	Gainesville	Alachua
Hancock, John W.	El. V.	Bostwick	Putnam
Hansbrough, John H.	Ag. Sp.	Tampa	Hillsborough
Hansen, Kenneth K.	A.B. 2	Tallahassee	Leon
Hardaway, Franklin B.	B.S. 1	Orlando	Orange
Hardman, Joseph	Ag. Sp.	Pernambuco	Brazil
Hare, Clarence C.	Pre-Med. 1	Avon Park	Highlands
Hare, Richard S.	L. 1	Lakeland	Polk
Harkness, Robert B.	Ag. 1	Lake City	Columbia
Harmon, James S.	L. Sp.	Gainesville	Alachua
Harper, Charles J.	Ag. V.	Millville	Bay
Harper, Edward F.	E. 1	Tampa	Hillsborough
Harris, Frank M.	L. 1	St. Petersburg	Pinellas
Harris, Pete	B.S. 2	Tampa	Hillsborough
Harris, Richard L.	Ag. V.	Auburndale	Polk
Harris, Robert H.	A.B. 1	Tampa	Hillsborough
Harrison, Bennie	N. 2	Bushnell	Sumter
Harrison, William M.	Pre-Med. 1	Cottondale	Jackson
Harry, Edward P.	Ag. 2-yr.	Pompano	Broward
Hart, Maurice W.	Ag. 1-yr.	Miami	Dade
Hartman, George W.	E. Sp.	Pensacola	Escambia
Harton, Leon J.	El. V.	Daytona Beach	Volusia
Hartridge, Benj. D.	L. 1	Jacksonville	Duval
Hauptman, Oliver H.	B.S. 1	Zolfo	Hardee
Hauser, Charles R.	E. 3	Miami	Dade
Haynes, John M.	B.S. 2	Dunnellon	Marion
Haynes, James P.	L. Sp.	Knoxville	Tennessee
Hays, Gordon	L. 1	Arcadia	DeSoto
Hazard, John B.	Pre-Med. 1	Jacksonville	Duval

Name	Classification	Postoffice	County or State
Heacock, Ford W.	B.S. 1	Sebring	Highlands
Heitzman, Frank, Jr.	Ag. V.	Gainesville	Alachua
Helseth, Oswald L.	Ag. 2	Vero	Saint Lucie
Henderson, Edward C.	Ag. V.	Kinnards	South Carolina
Henderson, George L.	A.B. 3	Tallahassee	Leon
Henderson, James W.	E. 2	Plant City	Hillsborough
Henderson, W. Douglas	E. 1	Tallahassee	Leon
Henderson, William L.	El. V.	Greenwood	Jackson
Hendry, Friebele W.	Pre-Med. 1	St. Petersburg	Pinellas
Hendry, William M.	L. 1	Fort Myers	Lee
Henley, T. Davis	A.B. 3	Inverness	Citrus
Henrick, John	L. 1	Philadelphia	Pennsylvania
Hensley, Ernest S.	A.B. 1	Ocala	Marion
Herb, Charley B.	Ag. V.	Lake City	Columbia
Herlong, John S.	N. 2	Micanopy	Alachua
Herrington, Roger G.	L. Sp.	Swainsboro	Georgia
Hewitt, Bion E.	B.S. 1, N. 2	Melbourne	Brevard
Hiatt, Clifford R.	Ag. 3	Gainesville	Alachua
Hickman, William P.	E. 1	Tampa	Hillsborough
Hills, Paul W.	B.S. 1	Panama City	Bay
Hinckley, Elmer D.	A.B. 2	Jacksonville	Duval
Hinson, Murphy R.	A.B. 1	Hinson	Gadsden
Hirt, Madison B.	Ag. V.	Tallahassee	Leon
Hitchcolk, George R.	L. 1	Jacksonville	Duval
Hodges, Robert L.	A.B. 1	Orlando	Orange
Hogarth, Leeson A.	E. 4	Stuart	Palm Beach
Hokenstad, Lloyd V.	A.S. Sp.	Tampa	Hillsborough
Holland, Hurley W.	L. 3	Gainesville	Alachua
Holland, Otto D.	L. 1	Orlando	Orange
Hollingsworth, L. L.	El. V.	Kenansville	Osceola
Hollinrake, Allen T.	A.B. 3	Gainesville	Alachua
Holman, Christopher B.	Ag. V.	Quincy	Gadsden
Hooks, Lloyd C.	L. 2	Lakeland	Polk
Horne, Maurice E.	Pre-Med. 1	Monticello	Jefferson
Horne, Wheeler N.	Pre-Med. 2	Ocala	Marion
Hoskins, Roy B.	A.B. 3	Tampa	Hillsborough
Houser, Felder	E. 1	St. Petersburg	Pinellas
Howard, Girdie H.	Pre-Med. 2	Winter Haven	Polk
Howard, Homer	T. Sp.	Sarasota	Sarasota
Howard, Walter G.	Pre-Med. 2	Winter Haven	Polk
Howell, Homer V.	Ag. V.	Esto	Holmes
Howell, Hubert A.	B.S. 1	Chattahoochee	Gadsden
Hua, Hsiu S.	Grad.	Tunghai, Yunnan	China
Hubbard, Donald	E. 3	Terra Ceia	Manatee
Hudson, Jas. A.	Ag. 2	Miami	Dade
Hudson, Thos. A.	Ag. V.	Vernon	Washington
Huggins, Harvey B.	B.S. 1	Malabar	Brevard
Hughes, Jos. G.	N. 2	Cedar Keys	Levy
Hughes, Randall H.	T. 4	Ponce de Leon	Holmes
Hull, W. Victor, Jr.	E. 1	Jacksonville	Duval
Hume, Edward G.	Ag. 1	Jacksonville	Duval
Hunter, Frank R.	B.S. 3	Ft. Myers	Lee
Hunter, Leslie L.	El. V.	Ft. Myers	Lee
Hutson, Albert D.	E. 1	St. Augustine	St. Johns
Inman, Richard M.	Ag. 2-yr.	Winter Haven	Polk
Ives, J. Cason	L. 1	Ojus	Dade
Jackson, John L.	A.S. Sp., E. 2	Largo	Pinellas
James, Reese C.	Ag. 2	Gainesville	Alachua
Jeacle, William	T. 3	Mandarin	Duval

Name	Classification	Postoffice	County or State
Jennings, Apperson H.	Ag. V.	Little Rock	Arkansas
Jennings, Benj. L., Jr.	L. 2	Okeechobee	Leon
Jennings, Jos. P.	E. 3	Ganzalez	Escambia
Jennings, Lester W.	L. 2	Okeechobee	Leon
Johnson, Alex R.	Ag. Sp.	Lutz	Hillsborough
Johnson, Chas. W.	L. 2	Largo	Pinellas
Johnson, Falcon L.	Pre-Med. 1	Gainesville	Alachua
Johnson, Henry C.	T. 4	Holt	Okaloosa
Johnson, Homer	Ag. V.	Atlanta	Georgia
Johnson, Richard G., Jr.	A.B. 1	Tallahassee	Leon
Johnson, Victor F.	E. 2	Key West	Monroe
Jones, A. Ben	El. V.	Starke	Bradford
Jones, Albert K.	Pre-Med. 1	Jacksonville	Duval
Jones, Earle E.	A.B. 1	Ft. Myers	Lee
Jones, Jennings B.	El. V.	Newberry	Alachua
Jones, J. McHenry	L. 2	Pensacola	Escambia
Jones, Mozes Z.	Ag. V.	Gainesville	Alachua
Jones, T. Allan	Pre-Med. 1	Sanford	Seminole
Jones, W. Eugene	Ag. 3	Bartow	Polk
Jusko, Geo. J.	El. V.	New York	New York
Juster, Isidore L.	E. 1	Tampa	Hillsborough
Juve, Raynold H.	Ag. 2-yr.	Vero	St. Lucie
Keen, Charlton D.	A.B. 1	Marianna	Jackson
Keen, J. Velma	L. 3	Marianna	Jackson
Keen, Wm. H.	E. 2	Bradentown	Manatee
Keller, Frank M.	E. 3	Ft. Meade	Polk
Kelley, John G.	Ag. V.	Gainesville	Alachua
Kelton, Geo. R.	El. V.	Evansville	Indiana
Kennedy, James J.	N. 2	Jacksonville	Duval
Kennedy, Jos. H.	Ag. 1	Terra Ceia	Manatee
Kennedy, Wm. T.	L. 1	Ft. Lauderdale	Broward
Kilcrease, James A.	Ag. V.	Baker	Okaloosa
Kilcrease, Jesse L.	Ag. V.	Baker	Okaloosa
Kilgore, Fred	E. 3	Clearwater	Pinellas
King, John T.	A.S. Sp.	Chattanooga	Tennessee
King, Walter R.	A.B. 3	Lakeland	Polk
Kinney, Wm. C., Jr.	Ag. 1-yr.	Winter Haven	Polk
Kinnon, Ben F.	El. V.	Millwood	Georgia
Kirkland, Harvey	Ag. V.	Loughman	Polk
Klein, Stephen T.	E. 1	Pensacola	Escambia
Klock, J. Harold	A.B. 4	Orlando	Orange
Knight, Eury M.	L. 2	Gainesville	Alachua
Knight, Fred K.	Ag. 1	Melbourne	Brevard
Knight, Hollis V.	A.B. 2	Starke	Bradford
Knight, Hugh E.	E. Sp.	Valrico	Hillsborough
Knight, Walter E.	A.B. 1	Lake Butler	Union
Koerner, Alfred	Pre-Med. 1	Miami	Dade
Koonce, Claude L.	El. V.	Coleman	Sumter
Koontz, Harry I.	Ag. V.	South Fork	Pennsylvania
Ladd, Wm. P., Jr.	E. 3	DeLand	Volusia
Laird, Wm. J.	Ag. V.	Darlington	Walton
Lamons, Albert B.	T. Sp.	Gainesville	Alachua
Land, Emory L.	E. 1, Ag. 1	Mayo	Lafayette
Langford, John K.	B.S. 1	Lake Butler	Union
Langford, Maurice G.	A.B. 1	Lake Butler	Union
Langworthy, Fred. H.	E. Sp.	Daytona Beach	Volusia
Larson, Willie D.	El. V.	Gainesville	Alachua
Larsen, Willie D.	El. V.	Ft. Lauderdale	Brevard
Lasswell, Fred D.	Ag. V.	Tampa	Hillsborough

Name	Classification	Postoffice	County or State
Lau, Paul E.	Ag. 1-yr.	Detroit	Michigan
Lee, Homer B.	A.B. 2	Melrose	Alachua
Lee, John T., Jr.	El. V.	Sanford	Seminole
Leisher, Daniel L.	E. 4	Wabasso	St. Lucie
Leland, Paul E.	E. 3	St. Petersburg	Pinellas
Lennard, Oscar D.	Pre-Med. 1	Indrio	St. Lucie
Leonard, John R.	T. Sp.	Gainesville	Alachua
Leonard, Samuel W.	T. 1	Blountstown	Calhoun
Lester, Clifford J.	Ag. 2	Kissimmee	Osceola
Lester, Donald L.	El. V.	Danville	Kentucky
Lester, Eugene H., Jr.	A.B. 1	Tampa	Hillsborough
Lewis, Edward C., Jr.	L. 1, Ag. 2-yr.	Marianna	Jackson
Lewis, Robert E.	Pre-Med. 1	St. Petersburg	Pinellas
Lewis, Roger K.	L. 1	West Palm Beach	Palm Beach
Lilienthal, Henry F.	L. 1	Ortega	Duval
Lindelie, Samuel O.	A.B. 2	St. Petersburg	Pinellas
Lindsey, Lawrence	Ag. V.	Milton	Santa Rosa
Linebaugh, Chas. D.	A.B. 1	Tampa	Hillsborough
Link, Carl T.	Ag. 4	Orlando	Orange
Linton, Wm. R.	A.B. 1, N. 2	Monticello	Jefferson
Little, Robert G.	L. 2	Jacksonville	Duval
Livingston, Donald C.	Ag. 1	Jacksonville	Duval
Lobean, Orlie H.	Ag. 2-yr.	Orlando	Orange
Loewenkopf, Sollie J.	Pre-Med. 1	Jacksonville	Duval
Logan, Jos. H.	E. 1, Ag. 1	Sneads	Jackson
Lohmeyer, Rudolph C.	L. 3	Jacksonville	Duval
Longee, Nelson C.	E. 1	Daytona Beach	Volusia
Looper, Thos. S.	T. 2	Livingston	Tennessee
Lord, Earll L.	Grad.	Gainesville	Alachua
Lorraine, Fred.	E. Sp.	Orlando	Orange
Lowery, Alva E.	El. V.	Bagdad	Santa Rosa
Lummus, Thos. J.	N. 1	Miami	Dade
McAllister, James S.	L. 1, A.B. 1	Palatka	Putnam
McAlpin, Ira M.	L. 1, Grad.	Mayo	Lafayette
McBrayer, Reuben A.	Ag. 1	Quincy	Gadsden
McBride, Wm. H.	Ag. 4	Seville	Volusia
McCain, Herschel A.	Ag. V.	Ruskin	Hillsborough
McCall, Frank	Ag. V.	Gainesville	Alachua
McCallum, Kingsley A.	E. Sp.	Jacksonville	Duval
McClain, Howard E.	B.S. 3	Whistler	Alabama
McLendon, Geo. M.	B.S. 4, T. 4	Gainesville	Alachua
McLendon, Henry G.	Ag. 1	Tampa	Hillsborough
McClung, J. Newton, Jr.	E. 1	Clearwater	Pinellas
McClure, John R.	Pre-Med. 1	Pensacola	Escambia
McCorkle, Edward P.	L. 1	Lakeland	Polk
McDavid, Robt. H.	A.S. Sp.	Hinson	Gadsden
McDonald, Jackson H.	E. Sp.	Moore Haven	Glades
McDonald, Raemond E.	L. 1	Tampa	Hillsborough
McDowell, David F.	A.B. 2	Panama City	Bay
McGhin, Wm. C.	T. 1	Jasper	Hamilton
McInnis, Sam W.	T. 2	O'Brien	Suwanee
McKay, Allan C.	Ag. 1-yr.	Tampa	Hillsborough
McKillop, Ian H.	L. 3	Homeland	Dade
McKinney, Volley	El. V.	Starks	Bradford
McLane, Eldridge F.	T. 4	Greensboro	Gadsden
McLeod, A. Howell	Pre-Med. 1	Lakeland	Polk
McMullen, Chester B.	L. 2	Largo	Pinellas
McRee, John W., Jr.	B.S. 1	Tampa	Hillsborough

Name	Classification	Postoffice	County or State
McVickers, Jos. W.	T. 2	Chipley	Washington
McWhorter, Benj. C.	T. 1	Umatilla	Lake
Mabry, Harvey M.	L. 1	Jacksonville	Duval
Mahannah, Wade D.	E. 3	Ft. Lauderdale	Broward
Mahn, Ralph W.	Ag. V.	Gainesville	Alachua
Mann, Robert H.	Ag. 1	Mannville	Putnam
Maines, John E.	B.S. 4	Lake Butler	Union
Mallory, Edmund C., Jr.	El. V.	St. Petersburg	Pinellas
Malphurs, Coey	E. 1	High Springs	Alachua
Malphurs, Ojus	E. 2	High Springs	Alachua
Mansour, Fred F.	A.S. Sp.	Jacksonville	Duval
Markham, Jos. H.	A.B. 2	Lake City	Columbia
Marshall, Carl A.	E. 1	St. Augustine	St. Johns
Marsicano, Ralph A.	L. 2	Tampa	Hillsborough
Martel, Grant A.	Ag. 2	Fellsmere	Saint Lucie
Martin, John B. G.	El. V.	Gainesville	Alachua
Martin, Leonard A.	E. Sp.	St. Augustine	St. Johns
Martin, Malcolm W.	A S. Sp.	Quincy	Gadsden
Martinez, Mario E.	Pre-Med. 1	Key West	Monroe
Mason, Ernest E.	A.B. 1	Century	Escambia
Mason, Reuben M., Jr.	B.S. 2	Sanford	Seminole
Massey, George B., Jr.	B.S. 1	Dade City	Pasco
Massey, Herbert S.	B.S. 4	Dade City	Pasco
Matchett, Calvin J.	Ag. 4	Interlachen	Putnam
Mathews, Edward L.	T. 4	Bartow	Polk
Mathis, Otis	A.B. 2	Paxton	Walton
Matthews, Horace G.	A.B. 1	Hawthorne	Alachua
Matthews, Jackson C.	A.B. 2	Trenton	Alachua
Mays, Charles A.	A.B. 1	Pensacola	Escambia
Meadows, Woodard O.	El. V.	Moultrie	Georgia
Meeks, A. Elmore	B.S. 1	Tampa	Hillsborough
Mellor, John W.	E. 3	Jacksonville	Duval
Melluish, Henry	A.S. Sp.	Gainesville	Alachua
Melton, James E.	A.B. 1	Ocala	Marion
Melton, John J.	Ag. V.	Jackson	Tennessee
Merrin, James F.	A.B. 4	Plant City	Hillsborough
Merrin, Joe K.	E. 2	Plant City	Hillsborough
Messick, Walter L.	Ag. 1	Bowling Green	Hardee
Mickler, Maynard	E. 1	Ponce de Leon	Holmes
Mickler, Peter	Ag. V.	Arcadia	DeSoto
Middleton, William S.	A.B. 2	Pomona	Putnam
Milam, Geo. W.	A.B. 4, L. 1	Jacksonville	Duval
Miller, Forrest D.	N. 1	Gainesville	Alachua
Miller, Hermas B.	B.S. 1	Brooksville	Hernando
Miller, Noelan W.	B.S. 2	Gainesville	Alachua
Miller, Roland E.	E. 1	Bradentown	Manatee
Miller, R. Glover	A.B. 2	Jacksonville	Duval
Millican, Edward W., Jr.	Ag. 2-yr.	Waldo	Alachua
Moore, Alfred T.	E. 1	Arcadia	DeSoto
Moore, Dewey R.	Pre-Med. 1	Darlington	Walton
Moore, Ellis	T. 2	Milligan	Okaloosa
Moore, Howard E.	L. 1	Clearwater	Pinellas
Moore, J. Sherman	Ag. 2	Sanford	Seminole
Morgan, Chas. E.	B.S. 4	Miami	Dade
Morgan, Frank C.	L. 1	Arcadia	DeSoto
Morgan, Wm. D.	L. 1	Jacksonville	Duval
Morris, Clarence E.	B.S. 1	Pensacola	Escambia
Morris, Loren A.	N. 1	Bushnell	Sumter
Moss, Roland D.	L. 1	Jacksonville	Duval

Name	Classification	Postoffice	County or State
Moul, Horace C.	E. Sp.	West Palm Beach	Palm Beach
Mounts, Marvin U.	T. 1	Gainesville	Alachua
Munson, Roswell W.	B.S. 1	Sarasota	Sarasota
Murphree, John A. H.	A.B. 1	Gainesville	Alachua
Murphy, James N.	El. V.	Westville	Holmes
Murrell, Albert N.	B.S. 1	Lakeland	Polk
Musselwhite, Wm.	N. 2	Homestead	Dade
Myers, George U.	B.S. 1	Chipley	Washington
Myers, Willard L.	A.B. 1	Chipley	Washington
Nagle, Levi M.	Ag. V.	Interlachen	Putnam
Nehrling, Berthald E.	El. V.	Orlando	Orange
Nelson, Clarence W.	Ag. 4	Titusville	Brevard
Nettles, Clarence L.	L. 1	Orlando	Orange
Newton, Robert D.	E. Sp.	Citra	Marion
Norris, James L.	Ag. V.	Freeport	Walton
Norton, Clyde H.	E. 1, Ag. 1	Winter Haven	Polk
Nunn, George M.	B.S. 1, Ag. 2-yr.	Brooksville	Hernando
O'Bryant, Horace	T. 4	Oxford	Sumter
Odom, Emery S.	T. 4	Munson	Santa Rosa
Ogletree, Clarence M.	Ag. V.	Oswego	New York
Oliver, Chas. C.	E. Sp.	Pensacola	Escambia
Oller, Forrest T.	Ag. 4-mo.	Wheeling	West Virginia
O'Neal, Geo. B.	Ag. V.	Pensacola	Escambia
Ormsby, Aubrey C.	Ag. 2	Larkins	Dade
Osborne, John A.	Pre-Med. 1	Tampa	Hillsborough
Overstreet, Murray W.	A.B. 1	Kissimmee	Osceola
Owens, Wallace B.	L. 1	Tampa	Hillsborough
Padgett, Charles	Ag. V.	Darlington	Walton
Padgett, Mack H.	L. Sp.	Gainesville	Alachua
Page, Martin C.	Ag. V.	Stamford	Connecticut
Parker, Francis W.	A.B. 3	Tampa	Hillsborough
Parker, Marcus A., Jr.	L. 1	Knoxville	Tennessee
Parker, William L.	Ag. V.	Lake City	Columbia
Parmenter, William G.	E. 1	Orange Park	Clay
Parrish, Philip H.	A.S. Sp.	Gainesville	Alachua
Patrick, Jerald E.	N. 2	Umatilla	Lake
Patrick, John W.	Ag. V.	Umatilla	Lake
Patterson, Charles E.	Ag. 2-yr.	Muscogee	Escambia
Paul, Frank C.	Ag. 1	Tampa	Hillsborough
Peacock, Chas. E.	A.B. 1	Williston	Levy
Pealen, Porter L.	T. 4	Red Rock	Santa Rosa
Pearce, John E.	E. 1	Newberry	Alachua
Pearce, J. Martine	B.S. 1	Tampa	Hillsborough
Peeples, Earl E.	E. 2	Lake Butler	Union
Pendarvis, L. Ted	Ag. 1	Blountstown	Calhoun
Pender, M. Sewell	A.S. Sp.	Sneads	Jackson
Pepper, William M., Jr.	A.B. 2	Gainesville	Alachua
Perkins, Ralph P.	E. 3	Pine Castle	Orange
Perry, Carl E.	Ag. Sp.	Miami	Dade
Perry, Columbus W.	El. V.	Jacksonville	Duval
Perry, Henry, Jr.	E. 2	Wildwood	Sumter
Perry, Henry D.	T. 1	Miami	Dade
Perry, Louelyn	Ag. V.	Coleman	Sumter
Persons, Chas. W.	T. 1	Summerfield	Marion
Peterson, Walter S.	Ag. V.	Brooklyn	New York
Petteway, Gordon P.	A.B. 1	Brooksville	Hernando
Pfeil, Walter R.	Ag. V.	Lowell	Marion
Phillips, I. W., Jr.	A.B. 1	Tampa	Hillsborough
Philpot, Henry P.	L. Sp.	Bell	Alachua

Name	Classification	Postoffice	County or State
Pierce, Robert Bell	A.S. Sp.	Longbranch	Clay
Pierce, Robt. S., Jr.	A.B. 2	Marianna	Jackson
Pipkin, Bunyan	Ag. 4	Safety Harbor	Pinellas
Polk, Edgar B.	Ag. V.	Seville	Volusia
Pomeroy, Stewart L.	E. 2	Jacksonville	Duval
Pomeroy, William H.	Ag. 2-yr.	Orlando	Orange
Porter, Richard G.	B.S. 1	Apalachicola	Franklin
Potter, Anderson H.	Pre-Med. 2	Leesburg	Lake
Preece, Richard, Jr.	E. 2	St. Petersburg	Pinellas
Prescott, Ford L.	E. 3	Gainesville	Alachua
Price, Carlton G.	E. 1	West Palm Beach	Palm Beach
Price, Roland M.	Ag. V.	Gainesville	Alachua
Prince, George L.	A.B. 1	Jennings	Hamilton
Prine, Dennis M.	Ag. V.	Ocala	Marion
Pryor, George W.	Ag. V.	Mary Esther	Okaloosa
Quesaday, Esteban de V.	E. Sp.	Santiago	Cuba
Raa, Bertel N.	A.B. 4	Tallahassee	Leon
Raasch, Ezera E.	B.S. 1	Leesburg	Lake
Rabon, Warren F.	Ag. V.	Chipley	Washington
Rambo, David A.	E. 2	Orlando	Orange
Ramsey, Louie R.	T. 2	Warrington	Escambia
Raulerson, Hiram H.	A.B. 1, N. 2	Okeechobee	Saint Lucie
Redman, Russell P.	E. 4	Fort Lauderdale	Broward
Regero, Anthony	A.B. 4	Kissimmee	Osceola
Regero, Charles J.	B.S. 3	Tampa	Hillsborough
Regester, Elvyn A.	Ag. V.	Bloomington	Iidiana
Register, Chas. H.	B.S. 1	Lake Butler	Union
Rentfrow, Wm. F.	A.S. Sp., L. 1	Jacksonville	Duval
Revell, Kervin D.	B.S. 1	Wauchula	Hardee
Reynolds, John R.	El. V.	Damascus	Georgia
Rhudy, James T.	E. Sp.	Gainesville	Alachua
Rhudy, Rob Roy	L. 2	Gainesville	Alachua
Richardson, LeRoy L.	Ag. 2-yr.	Evinston	Alachua
Richbourg, Lance C.	Ag. 4	Crestview	Okaloosa
Richey, Horace E.	B.S. 1	Satsuma	Putnam
Richmond, Caleb H.	A.B. 1	Gainesville	Alachua
Riddle, Howard S.	E. Sp.	Clearwater	Pinellas
Roach, J. Spencer	Pre-Med. 2	High Springs	Alachua
Robbins, Milton E.	B.S. 2	Miami	Dade
Roberson, Henry L.	Ag. V.	Ocala	Marion
Roberts, Hugh, Jr.	E. 2	Miami	Dade
Roberts, W. Thaxton	Ag. V.	Tacoma	District of Columbia
Robertson, John D.	B.S. 1, L. 1	Ocala	Marion
Robinson, A. Cecil, Jr.	N. 1	Gainesville	Alachua
Robinson, Paschal E.	Ag. V.	Laurel Hill	Okaloosa
Robinson, Winthrop M.	Pre-Med. 1	Tallahassee	Leon
Robshaw, Fred. H.	B.S. 2	Hastings	St. Johns
Rogers, W. Wellford	El. V.	Harris	North Carolina
Rogers, Weiland W.	B.S. 3	Jacksonville	Duval
Rose, Alfred P.	Ag. V.	San Antonio	Texas
Rose, John T.	N. 1	Eastport	Duval
Rose, Wm. L.	L. 1	Punta Gorda	Charlotte
Rosenhouse, Moses H.	L. 3	Milton	Santa Rosa
Royer, John W.	Ag. 3	Roanoke	Virginia
Rozier, Robt. C.	B.S. 1	Chipley	Washington
Russell, Fordyce M.	Ag. 2-yr.	Sanford	Seminole
St. John, Newton D.	B.S. 2	Daytona Beach	Volusia
Sale, Thos. D., Jr.	L. 1	Jacksonville	Duval

Name	Classification	Postoffice	County or State
Salley, Henry M.	B.S. 1	Jacksonville	Duval
Sanders, Marcus E.	E. 3	Trenton	Alachua
Sanford, Chas. E.	Ag. 2-yr.	Plant City	Hillsborough
Sapp, Fred W.	Pre-Med. 1	Chipley	Washington
Sapp, William	Ag. V.	Starke	Bradford
Sasnett, Irving	El. V.	Westville	Holmes
Sasse, Frederick L.	L. 1	Puffalo	New York
Sauls, Clyde H.	A.B. 1	Boston	Georgia
Sauls, Charlie T.	Ag. 1	Largo	Pinellas
Sauls, Walter S.	Ag. V.	Tavares	Lake
Saussy, Fred W.	E. Sp.	Hawkinsville	Georgia
Savage, Gordon H.	Ag. V.	Miami	Dade
Scarborough, Edgar W.	Ag. 1	Chattahoochee	Gadsden
Schabinger, Ernest M.	Ag. 3	Delray	Palm Beach
Schabinger, John E.	Ag. 2-yr.	Delray	Palm Beach
Schubert, Walter M.	E. 2	Jacksonville	Duval
Schumacher, Floyd M.	B.S. 1	Sebring	Highlands
Schwaen, John L.	B.S. 1	Tampa	Hillsborough
Schwartz, Karl W.	B.S. 3	Miami	Dade
Sconiers, Frank H.	Ag. V.	DeFuniak Springs	Walton
Scott, Ivan W.	E. 3	Dunkirk	New York
Scotten, Rawley W.	B.S. Sp.	Gainesville	Alachua
Scruggs, Sigsbee L.	L. 3	Aucilla	Jefferson
Sculeri, Samuel A.	Pre-Med. 1	Tampa	Hillsborough
Sebring, H. Orvel, Jr.	A.B. 1	Sebring	Highlands
Selby, George W.	E. Sp.	Oldsmar	Hillsborough
Semilof, Benj. B.	L. 1	Brooklyn	New York
Shannahan, Robt. A.	Ag. V.	Alachua	Alachua
Sharon, Jas. G., Jr.	L. 1, A.S. Sp.	Sanford	Seminole
Sharpley, John H.	Pre-Med. 1	Key West	Monroe
Shearer, James R.	El. V.	Powell	Hernando
Shepard, Walter C.	Pre-Med. 2	Bagdad	Santa Rosa
Sheppard, Richard H.	B.S. 1	Tampa	Hillsborough
Sherman, John S.	Ag. 4	Miami	Dade
Shockley, Francis W.	B.S. 1	Avon Park	Highlands
Shores, Robt.	Ag. V.	Round Lake	Jackson
Shultz, Maurice D.	E. 1	Inverness	Citrus
Sias, Richard A.	B.S. 2	Orlando	Orange
Sider, Oscar P.	Ag. 4-mo.	Jacksonville	Duval
Siegal, Herman	L. 1	Jacksonville	Duval
Simmons, Andrew C.	E. Sp.	Jacksonville	Duval
Simmons, G. Ballard	T. 4	Ponce de Leon	Holmes
Simmons, Ralph A.	Ag. 2	Jacksonville	Duval
Simmons, Ralph D.	E. 1	Ocala	Marion
Simmons, Samuel J., Jr.	Pre-Med. 1	Arcadia	DeSoto
Simmons, Walker A.	Ag. V.	Milton	Santa Rosa
Simpson, John M. B.	A.B. 2	Orlando	Orange
Sims, Hiram G.	El. V.	Grand Ridge	Jackson
Sixma, George G.	Ag. 1	Lake Helen	Volusia
Skelly, Chas. W.	A.B. 1, L. 1	Rockledge	Brevard
Skinner, John F.	E. Sp.	Jacksonville	Duval
Skinner, Wm. A.	Ag. 1	Umatilla	Lake
Slaughter, Henry	T. 4	Gainesville	Alachua
Smith, Bunnie O.	T. 2	Wewahitchka	Calhoun
Smith, Earl L.	El. V.	Ocala	Marion
Smith, English B.	Ag. V.	Madison	Madison
Smith, Edward E.	N. 2	Orlando	Orange
Smith, Egbert T.	A.S. Sp.	Arcadia	DeSoto
Smith, Foster S.	A.B. 2	Hawthorne	Alachua

Name	Classification	Postoffice	County or State
Smith, Harry M.	Ag. 1	Winter Garden	Orange
Smith, Howard	Ag. V.	Tampa	Hillsborough
Smith, John H.	El. V.	Gainesville	Alachua
Smith, Joseph G.	Ag. V.	Tignall	Georgia
Smith, Kenneth R.	Ag. 1.	DeFuniak Springs	Walton
Smith, Mack A.	E. 1, Ag. 1.	Inverness	Citrus
Smith, Richard M.	Ag. 3	Jacksonville	Duval
Smith, Wayne A.	Ag. 1.	Clearwater	Pinellas
Smith, Wilbur R.	B.S. 1	Gainesville	Alachua
Smith, W. Raymond	B.S. 1	Panama City	Bay
Smith, W. Robt.	L. 1	Ocala	Marion
Smith, Wm. Wall	A.B. 1	Tampa	Hillsborough
Smith, W. Warner	E. Sp.	Ocala	Marion
Snow, Harry M., Jr.	B.S. 1	St. Augustine	St. Johns
Snow, Wm. W.	Ag. 2-yr., L. 1	St. Augustine	St. Johns
Sobol, Meyer W.	L. Sp.	Gainesville	Alachua
Sollee, Arthur N.	E. 4	Jacksonville	Duval
Sparkman, Amos L.	Ag. V.	Plant City	Hillsborough
Spear, Albert L.	A.B. 1	Chattahoochee	Gadsden
Speer, Herbert L.	Ag. V.	Umatilla	Lake
Spencer, Garland W., Jr.	L. 3	Sanford	Seminole
Spring, Louis H.	El. V.	Pittsfield	Massachusetts
Stahl, Steadman S.	L. Sp.	Savannah	Georgia
Staley, Crawford N.	Pre-Med. 1	St. Petersburg	Pinellas
Stanley, Geo. T.	El. V.	Gainesville	Alachua
Stanley, George B.	B.S. 3	Jacksonville	Duval
Stanley, Richard L.	B.S. 3	Jacksonville	Duval
Stansfield, Harold C.	E. 3	Bradentown	Manatee
Stanton, Wm. W.	El. V.	Miami	Dade
Steckert, Wm. H.	E. 1	Gainesville	Alachua
Steele, John E.	El. V.	Palatka	Putnam
Stein, Maurice	A.B. 4, L. 1	Tampa	Hillsborough
Stephens, George	L. 1	Birmingham	Alabama
Stephens, Lowell O.	A.B. 1	Stewardson	Illinois
Stephens, Walter H.	Ag. V.	Gainesville	Alachua
Stevens, Hugh Q.	A.B. 3	St. Augustine	St. Johns
Stevens, Malcolm L.	L. 1	St. Augustine	St. Johns
Stewart, Chas. T.	El. V.	Miami	Dade
Stewart, Jas. W.	El. V.	Mayodan	North Carolina
Stewart, Lloyd D.	Ag. 3	Bradentown	Manatee
Stewart, Roy E.	Ag. 1.	Zephyrhills	Pasco
Stokes, Wade H.	El. V.	Laurel Hill	Okaloosa
Storm, Francis F.	L. 1	Clearwater	Pinellas
Strickland, Judson W.	Ag. 2	Homestead	Dade
Strom, Samuel M.	Ag. 2-yr.	Juniper	Gadsden
Strong, Chas. L.	Ag. V.	Maitland	Orange
Strum, Al D.	A.S. Sp.	St. Petersburg	Pinellas
Sullivan, Chas. M.	Ag. V.	Gainesville	Alachua
Sullivan, Wm. B.	Ag. V.	McAlpin	Suwanee
Summers, Charnelle H.	E. 2	West Palm Beach	Palm Beach
Summitt, Robt. E.	Pre-Med. 2	Orlando	Orange
Swails, Spencer A.	El. V.	Yulee	Nassau
Swanson, Robt. M.	L. 1	Gainesville	Alachua
Sweat, Everett D.	El. V.	Green Cove Springs	Clay
Sweat, Wm. E.	L. 1	Mulberry	Polk
Sweeney, Edward L.	El. V.	Miami	Dade
Sweeney, Paul J.	T. 4	Gainesville	Alachua
Swoope, Chas. C.	B.S. 1	New Smyrna	Volusia
Taylor, Chas. A.	Ag. V.	Miccosukee	Leon

Name	Classification	Postoffice	County or State
Taylor, J. Clagett	A.B. 3	Sebring	Highlands
Taylor, Jas. H.	L. Sp.	Gainesville	Alachua
Taylor, John S., Jr.	Ag. 1	Largo	Pinellas
Taylor, Wilmer J.	A.B. 1	St. Petersburg	Pinellas
Terry, Royall P.	L. 3	Jacksonville	Duval
Thigpen, Herbert H.	Ag. V.	Miami	Dade
Thomas, Brantley F.	Ag. V.	Glen St. Mary	Baker
Thomas, Clarence S.	E. Sp.	Gainesville	Alachua
Thomas, Irvin G.	E. 3	Ft. Myers	Lee
Thomas, Jesse	El. V.	New River	Union
Thomas, Philip E.	B.S. 1	Gainesville	Alachua
Thompson, Leulious L.	A.B. 3	Tarpon Springs	Pinellas
Thompson, William E.	L. 3	Tampa	Hillsborough
Thornton, Burwell	L. 3	Ormond Beach	Volusia
Thrift, Mack D.	El. V.	Winokur	Georgia
Tidwell, Cleveland M.	Ag. V.	DeFuniak Springs	Walton
Tills, Harry L.	Ag. V.	Starke	Bradford
Tillman, Rollie	Ag. Sp.	Lake Wales	Polk
Tillman, Sidney F.	El. V.	Gainesville	Alachua
Tillman, Walter M.	Ag. 4	Lake Wales	Polk
Todd, Leonard E.	E. 3	Ocala	Marion
Tolbert, Horace L.	T. 4	Ft. White	Columbia
Toms, Willard H., Jr.	El. V.	Waycross	Georgia
Tooke, Wm. L.	B.S. 3	Floral City	Citrus
Torretta, Joe N.	Pre-Med. 1	Tampa	Hillsborough
Towles, Alton M.	T. 1	Crawfordville	Wakulla
Travis, John Perry	El. V.	St. Petersburg	Pinellas
Trice, Ralph S.	Ag. V.	Hawkinsville	Georgia
Trimble, Robt. C., Jr.	E. 2	Bradentown	Manatee
Trottman, Warren E.	N. 2	Interlachen	Putnam
Tucker, David J.	Ag. 2	Williamston	South Carolina
Turner, Curtis L.	Ag. V.	Rochelle	Alachua
Turner, Roan J.	Ag. V.	Gainesville	Alachua
Turner, Willie L.	Ag. V.	Shelby	North Carolina
Turnley, Theodore T.	Ag. 4-mo.	Ft. Meade	Polk
Turrentine, Wesley	Pre-Med. 2	Wilmington	North Carolina
Ulmer, Roland J.	Ag. 2-yr.	Largo	Pinellas
Uptegraff, Eugene J.	A.B. 3	Beaver	Pennsylvania
Urquhart, Henry E.	Ag. V.	Milton	Santa Rosa
Van Cleef, Clinton B.	Ag. 2	Glennwood	Volusia
Vansickel, Talmadge L.	Ag. 1	Gainesville	Alachua
Vaughan, Richard F.	A.B. 1	Dover	Hillsborough
Vereen, Vernon L.	Pre Med. 1	Miami	Dade
Villacres, Louis A.	Ag. 2-yr.	Guayaquil	Ecuador
Wakefield, Geo. N.	Ag. 1	Apalachicola	Franklin
Wainwright, N. D.	L. Sp.	Starke	Bradford
Walden, Dow G.	Ag. V.	Madison	Madison
Walker, Clifford L.	Ag. 4	Sanford	Seminole
Walker, Judson B.	T. 4	Baker	Okaloosa
Wallace, Jas. G.	T. 2	Williston	Levy
Wallace, Robt. G.	A.B. 1	Daytona	Volusia
Wallis, Thos. H.	Pre-Med. 2	Ocala	Marion
Walls, Merrill A.	A.S. Sp.	Gainesville	Alachua
Walsh, John E.	L. Sp.	Newton Centre	Massachusetts
Ward, Arad L.	El. V.	Bruce	Walton
Ward, Gilbert	Ag. V.	McDavid	Escambia
Ward, Wm. G.	L. 2	Miami	Dade
Warren, Edgar D.	L. Sp.	Tampa	Hillsborough
Warren, John P.	B.S. 1	Sebring	Highlands

Name	Classification	Postoffice	County or State
Warren, Wm. C.	A.B. 1	Tampa	Hillsborough
Washburn, Cyrus, Jr.	B.S. 1	Abington	Massachusetts
Watts, Olin E.	N. 1, A.S. Sp.	Bartow	Polk
Weatherwax, O. K.	E. 2	Tampa	Hillsborough
Weaver, Albert C.	A.B. 1	Miami	Dade
Weaver, Merle B.	N. 1	Tampa	Hillsborough
Webb, Curren E.	E. 1	St. Petersburg	Pinellas
Webb, Daniel B.	E. 2	Oakland	Orange
Webster, Edwin B.	B.S. 1	Jacksonville	Duval
Weedon, Fred H.	Grad.	Tampa	Hillsborough
Weeks, Hubert	A.B. 1	Tampa	Hillsborough
Weintraub, David	A.S. Sp.	Key West	Monroe
Weisbrod, Ted	A.B. 2	Gainesville	Alachua
Wells, Joel R., Jr.	T. 4, L. 1	Panama City	Bay
Wells, Wm. Green	Grad.	City Point	Brevard
Wells, Wm. J.	A.B. 1	Holley	Santa Rosa
Wesley, Herman F.	El. V.	Gainesville	Alachua
Wesson, Leonard A.	E. 3	Ocala	Marion
West, T. Franklin, Jr.	A.B. 3	Gainesville	Alachua
Wheeler, Jos. D.	T. 1	Gainesville	Alachua
Whitcomb, Walter R.	Ag. V.	Umatilla	Lake
White, Alec	Ag. & T. 3	Tampa	Hillsborough
White, Edward M.	El. V.	Noma	Holmes
White, Frank G.	L. 1	Newberry	Alachua
White, Jos. S.	L. 2	Gainesville	Alachua
White, Kinnon R.	El. V.	Muscogee	Escambia
Wiig, Howard E.	Ag. 2	Wahpeton	North Dakota
Wiggins, Marvin	El. V.	Bartow	Polk
Wilensky, Moses C.	Pre-Med. 1	Jacksonville	Duval
Williams, Ben M.	El. V.	Bell	Alachua
Williams, Carl	A.B. 1	Alachua	Alachua
Williams, D. Everett	T. 4	Williston	Levy
Williams, Elmore H.	A.B. 1	Miami	Dade
Williams, Harry G.	A.B. 1	Tampa	Hillsborough
Williams, Herbert A., Jr.	L. 1	Jacksonville	Duval
Williams, Irvine D.	E. 3	Tampa	Hillsborough
Williams, John F., Jr.	T. 4	Monticello	Jefferson
Williams, Josiah A.	Ag. V.	Gainesville	Alachua
Williams, John L.	Pre-Med. 2	Tallahassee	Leon
Williams, Louis W.	L. Sp.	Pensacola	Escambia
Williams, Lovick P.	E. 1	Gainesville	Alachua
Williams, Rabun H.	Pre-Med. 1	Alachua	Alachua
Williams, Vernon F.	Ag. V.	Contonment	Escambia
Williamson, Frank H.	L. 1	Miami Beach	Dade
Williamson, Frank W.	Ag. 2-yr.	Clearwater	Pinellas
Wilsky, Chas. R.	E. Sp.	Tampa	Hillsborough
Willson, E. Bennett, Jr.	T. 2	St. Petersburg	Pinellas
Wilson, Horace S.	Ag. 3	Starke	Bradford
Wilson, Robt. M.	E. 2	Jacksonville	Duval
Wilson, Vern W.	Ag. 2	Kissimmee	Osceola
Windish. Edward B.	E. Sp.	Ft. Pierce	St. Lucie
Winfield, Jas. A.	E. 3	O'Brien	Suwanee
Winter, Thurston P.	A.B. 4	Oakland	Orange
Wise, J. Hooper	A.B. 1	Gainesville	Alachua
Witter, Frank H.	Ag. V.	Atlanta	Georgia
Wolfe, Floyd E.	A.B. 2	St. Petersburg	Pinellas
Wol enden, Wm. L.	L. 1	Palatka	Putnam
Womble, Jas. B.	Ag. V.	Pittsboro	North Carolina
Womeldurf, Jas. F.	Ag. V.	Gainesville	Alachua

Name	Classification	Postoffice	County or State
Woodbery, Edward B.	A.B. 2	Quincy	Gadsden
Woodruff, Richard S.	Ag. 2-yr.	Orlando	Orange
Woodward, Reginald B.	E. 2	Dade City	Pasco
Work, Arthur Lee	T. 4	DeFuniak Springs	Walton
Wray, Robert	Ag. 3	Deland	Volusia
Wuthrich, Emmery B.	E. 2	Mulberry	Polk
Wyatt, Milton H.	A.B. 1	Bradentown	Manatee
Yarnoff, Wm. J.	E. 3	Gainesville	Alachua
Yancey, Wm. P.	El. V.	Gainesville	Alachua
Yates, Walter S.	T. 4	Gainesville	Alachua
Young, Martin G.	Ag. 2-yr.	Jupiter	Palm Beach
Young, Ray F.	A.S. Sp., L. 1	Gainesville	Alachua
Young, Robt. C.	B.S. 2	Ozono	Pinellas
Zuber, Frank E.	Ag. V.	Tampa	Hillsborough

SUMMER SCHOOL, 1921

Name	Postoffice	County or State
Abbott, Chas. E.	Fort Green Springs	Hardee
Abbott, Fred	Detroit	Michigan
Abraham, Frieda	Wildwood	Sumter
Abraham, Judith Elizabeth	Wildwood	Sumter
Adams, Audrey Irene	Jennings	Hamilton
Adams, Barnett Davis	Gainesville	Alachua
Adams, Mrs. B. D.	Gainesville	Alachua
Adams, Edna	Lakeland	Polk
Adams, Gladys B.	Sanford	Seminole
Adams, Lilie B.	Boynton	Palm Beach
Adkins, Dorothy C.	Hawthorne	Alachua
Agnew, Frances	Ocala	Marion
Albritton, Kathlyn L.	Bowling Green	Hardee
Albury, Alice	Tampa	Hillsborough
Alger, Mary I.	Eustis	Lake
Allen, Edith Marjorie	Gainesville	Alachua
Allen, Miriam Estelle, Mrs.	Clearwater	Pinellas
Ambrose, Mrs. Claudia G.	Waldo	Alachua
Anderson, Edith Marion	Lakeland	Polk
Anderson, Gertrude	Raiford	Union
Anderson, Mrs. J. B.	Jacksonville	Duval
Anderson, Phillipa Gray	Tampa	Hillsborough
Armistead, James Austin	Gainesville	Alachua
Ashbrook, Mrs. Bertha H.	Brooksville	Hernando
Ashworth, A. E.	Ocala	Marion
Atkinson, Mary Crawford	Center Hill	Sumter
Atwater, Geo. Switzer	High Springs	Alachua
Atwater, Ralph Edward	High Springs	Alachua
Avriett, Grace Boyd	Jennings	Hamilton
Bailey, Clarice	Oxford	Sumter
Bailey, Edith M.	Clermont	Lake
Baker, Celestial Althea	Sutherland	Pinellas
Baldwin, Veda	Melrose	Putnam
Barco, Mrs. Maud Olive	Hawthorne	Alachua
Bard, Sara Hyatt	Palatka	Putnam
Barker, Lillian Angeline	Wauchula	Hardee
Barnes, Mollie Frances	Sidney	Hillsborough
Barrow, Lula Lee	Chiefland	Levy
Barry, Janie Imogen	Leesburg	Lake
Barton, Bertha Eleanor	Gainesville	Alachua
Bashaw, Wm. Niles	Gainesville	Alachua

Name	Postoffice	County or State
Baxter, Edna Otilla	Brooker	Bradford
Beach, Austin Osteen	Hastings	Saint Johns
Beach, Palmer Wm.	Hastings	Saint Johns
Beam, Mae	Melrose	Putnam
Beasley, Edythe Helen	Hawthorne	Alachua
Beasley, Mamie Florida	Hawthorne	Alachua
Beaver, Dorothy Mary	Key West	Monroe
Beck, Faye	Ocala	Marion
Beck, Mabel Kathryn	Ocala	Marion
Beeler, Lora Luvernia	Groveland	Lake
Beeson, Edward L.	Sarasota	Sarasota
Beeson, Mrs. Edward L.	Sarasota	Sarasota
Begg, Rose Gradick	Jacksonville	Duval
Belcher, Frances	Largo	Pinellas
Bell, Corrie	Alachua	Alachua
Bell, Lillie	Fort Meade	Polk
Bennett, Rhoda	Theressa	Bradford
Berkstresser, Mary	Hawthorne	Alachua
Beville, Hattie	Daytona	Volusia
Bevington, Nadine	Lake Worth	Palm Beach
Billingsley, Carrie	Reddick	Marion
Bishop, George Leonard	Pensacola	Escambia
Bivens, Wm. Jas.	Tampa	Hillsborough
Black, Robt.	Minneola	Lake
Blount, Mrs. Jimmie Lelia	La Belle	Lee
Bolton, Victoria Wells	Malabar	Brevard
Boone, Mrs. Mae Collins	Plant City	Hillsborough
Bouchelle, Anne Virginia	Deland	Volusia
Bowman, Clarence J.	Wauchula	Hardee
Boyd, Carrie Benie	Plant City	Hillsborough
Boyer, Joanna Amelia	Jacksonville	Duval
Boyle, Sarah Richards	Tampa	Hillsborough
Brabham, Maude Olive	Rockledge	Brevard
Bradham, Harry	Trilby	Pasco
Bradshaw, Alliene	Jennings	Hamilton
Bradshaw, Sadie	High Springs	Alachua
Brady, Charles Clyde	Leesburg	Lake
Brantley, Newman A.	Umatilla	Lake
Bratley, Homer Ellis	Buena Vista	Dade
Briggs, Uarda	Zephyrhills	Pasco
Brinson, Paul P., Jr.	Gainesville	Alachua
Bristol, Loris Rood	Gainesville	Alachua
Brodnax, Mrs. Stella B.	Jacksonville	Duval
Broer, Dulleye Elaine	Wauchula	Hardee
Bronough, Mrs. Nannie Graham	West Palm Beach	Palm Beach
Brooker, Marvin L.	Bell	Alachua
Broward, Elizabeth B., Mrs.	Birmingham	Alabama
Brown, Alice Winifred	Lake City	Columbia
Brown, Eunice Permelia	Bluff Springs	Suwanee
Brown, Geo. Wilmot	Lawtey	Bradford
Brown, Mrs. J. Calvin	Gainesville	Alachua
Brown, Mabel	Lake Butler	Bradford
Brown, Ruth	Lake City	Columbia
Brown, Winnie Irene	Sanford	Seminole
Bryant, Lola	Clermont	Lake
Bryant, Lorena C.	Bowling Green	Hardee
Bryce, Mary Inez	Ocala	Marion
Buck, Marguerite	Wood River	Madison
Buford, Dorothy Marguerite	Mayport	Duval

Name	Postoffice	County or State
Bullard, Thelma	Gainesville	Alachua
Bullock, Wm. Jennings	Arcadia	DeSoto
Bullock, Zola Pearl	Arcadia	DeSoto
Bundy, Aleta Lucile	Grandin	Putnam
Burnett, Minnie	New Smyrna	Volusia
Burnett, Paul Herbert	Bartow	Polk
Burry, Carrie May	Orange Lake	Marion
Burry, Georgia Elise	Orange Lake	Marion
Butler, Estelle	Lakeland	Polk
Butler, Mrs. Maude Lenna	Gainesville	Alachua
Calhoun, Sallie	St. Petersburg	Pinellas
Cameron, Bertha Gertrude	Avon Park	Highlands
Cameron, Pearl	Jacksonville	Duval
Camp, Mary F.	McIntosh	Marion
Cannon, Carl W.	McAlpin	Suwanee
Cannon, Mary A.	Gainesville	Alachua
Carey, Miriam Elaine	Key West	Monroe
Carleton, Boyd	Gainesville	Alachua
Caro, Albert Reed	Pensacola	Escambia
Carson, Agnes R.	Coconut Grove	Dade
Carter, Edgar W.	Oxford	Sumter
Carter, Edith Elizabeth	Dade City	Pasco
Carter, Randolph L.	Sarasota	Sarasota
Cason, Shafter W.	Otter Creek	Levy
Cass, Mrs. Agnes Redmond	Fort Lauderdale	Broward
Cates, Wm. Haywood	Tallahassee	Leon
Cathcart, Jessie Nora	Wauchula	Hardee
Cauthon, Allen	Brooker	Bradford
Cecil, Gladys Ruth	Tampa	Hillsborough
Chaffer, Herbert Hones	Longwood	Seminole
Chamberlain, Mrs. Isabelle L.	Daytona	Volusia
Chambers, Imo	Brooksville	Hernando
Champlain, Ralph	Jacksonville	Duval
Champlin, Edw. A.	Jacksonville	Duval
Churchwell, Blanche Dell	Fort White	Columbia
Clarke, Florence E.	Mulberry	Polk
Clark, Frances Sarah	Wall Springs	Pinellas
Clarke, Jno. Y.	Leesburg	Lake
Clark, Madge E.	Mulberry	Polk
Clark, Maggie Geneva	Trenton	Alachua
Clayton, Erwin A.	Aucilla	Jefferson
Clemons, Alvin	Brooker	Bradford
Clemont, Gertrude Rhoda	Bartow	Polk
Clyatt, Helen	Trenton	Alachua
Coe, Arthur Russell	Miami	Dade
Cogburn, Harry Park	Cottondale	Jackson
Coke, Mrs. Myrtle Allison	Saint Cloud	Osceola
Colbert, Iva H.	Miami	Dade
Coleman, Mrs. Amy L.	Lakeland	Polk
Coleman, Isabelle	Crooked Lake	Polk
Collier, Eunice	Otter Creek	Levy
Collins, Robert T.	Umatilla	Lake
Colson, Dorothy	Trenton	Alachua
Colson, Mary Della	Jennings	Hamilton
Colson, Ottie Marie	Tampa	Hillsborough
Cone, Ida Ruth	Plant City	Hillsborough
Connell, Pearl Inez	Pinetta	Madison
Connor, Miriam	Inverness	Citrus

Name	Postoffice	County or State
Conroy, Augusta Brooks	Wauchula	Hardee
Cook, Delilah	Clermont	Lake
Cook, Nellie May	Clermont	Lake
Cook, Mrs. Walter	Chipley	Washington
Cooper, Fannie Cleone	Gainesville	Alachua
Cooper, Josephine	Jacksonville	Duval
Cooper, Ruby Floyd	Gainesville	Alachua
Corbin, Inez Elliott	Mayo	LaFayette
Core, Edith Geraldine	Reddick	Marion
Corton, Edith L.	Apopka	Orange
Cottrell, Mrs. James	Gainesville	Alachua
Coverston, Mrs. Estelle	Manatee	Manatee
Coward, Maud Althea	Melrose	Alachua
Cox, Anita May	Alva	Lee
Cox, Ruth F.	Vero	Saint Lucie
Cozatt, Eleanor Irene	Miami	Dade
Cramer, Harry Francis	Ocala	Marion
Cravey, Lelia	Bradley Junction	Polk
Crawley, Herbert Eugene	Mount Verda	Lake
Creighton, Lelia Anna	Gainesville	Alachua
Crews, Vera	Wauchula	Hardee
Cromer, Alice L.	Jupiter	Palm Beach
Crook, Florence	Palatka	Putnam
Crum, Annie	Larkins	Dade
Crumpecker, Willie Jordan	Jacksonville	Duval
Cubberly, Hazel	Gainesville	Alachua
Cubberly, Helen F.	Gainesville	Alachua
Dakin, Dorothy	Sutherland	Pinellas
Darragh, Mrs. Marion	Fort Lauderdale	Broward
Davis, Catherine	Gainesville	Alachua
Davis, Edith C.	Mulberry	Polk
Davis, Elizabeth	New Augustine	Saint Johns
Davis, Juanita Marie	Thonotosassa	Hillsborough
Deane, Ruth E.	Jacksonville	Duval
Dear, Winnie	Arcadia	DeSoto
DeLaughter, Vera	Madison	Madison
Delk, Ruth	Eagle Lake	Polk
Demaree, Evelyn T.	Gainesville	Alachua
Dempsey, Irene	Webster	Sumter
Dennard, Dudley S.	Lake City	Columbia
DeVane, Janie Agnes	Jennings	Hamilton
DeVane, Mae Belle	Jennings	Hamilton
Dillard, Fay	DeLand	Volusia
Dodd, Augusta	Anthony	Marion
Dodson, Charles L.	Gainesville	Alachua
Donaldson, Malcolm G.	Shady Grove	Taylor
Doran, Effie Elsie	Gainesville	Alachua
Dorsey, Annie Elizabeth	Gainesville	Alachua
Douglas, Hester Isabelle	Punta Gorda	Charlotte
Downing, Edith	High Springs	Alachua
Downing, Ruth Anna	Wauchula	Hardee
DuBose, Bessie C.	Starke	Bradford
Dudley, Winifred	Newberry	Alachua
Duncan, Carrie E.	Fort White	Columbia
Duncan, Orrie D.	Fort White	Columbia
Durrance, Charles L.	Pine Castle	Orange
Dutton, Nellie V.	New Smyrna	Volusia
Dyson, Annie Bell	Sanford	Seminole
Dyson, Mary Eula	Sanford	Seminole

Name	Postoffice	County or State
Eagleton, Anne P.	Ocala	Marion
Ebinger, Rollin Jesse	Tampa	Hillsborough
Edmiston, Mrs. Robt. C.	Lakeland	Polk
Edmunds, Henry Reed	Farmville	Virginia
Edwards, James Maurice	Gainesville	Alachua
Ellis, Anita C.	Tampa	Hillsborough
Elmore, Anna	Bradentown	Manatee
Emerson, Francis	Gainesville	Alachua
Emmert, Paul	Bradentown	Manatee
Emmert, Mrs. Paul	Bradentown	Manatee
English, John Coley	Alva	Lee
English, Mrs. John C.	Alva	Lee
Etheredgen, James T.	Sebring	Highlands
Everett, Edith	Gainesville	Alachua
Everett, Florence Louise	Gainesville	Alachua
Everett, Hilda Margaret	Lake City	Columbia
Everett, Marian	Gainesville	Alachua
Eynard, Camille	Daytona Beach	Volusia
Faes, Julia	Moore Haven	DeSoto
Fant, Maud Eloise	Morristown	Levy
Farabee, Thomas N.	Wauchula	Hardee
Feagle, Madeline Louise	Alachua	Alachua
Feaster, J. Lynn	Micanopy	Marion
Fernald, Horace James	Melrose	Massachusetts
Fisher, Mrs. Lucy D.	West Palm Beach	Palm Beach
Folks, Rae	Juliette	Marion
Ford, Henrietta	South Jacksonville	Duval
Foulks, Frank Marshall	Tampa	Hillsborough
Frazee, Thelma	Winter Garden	Orange
Freeland, Lela V.	Lake Worth	Pam Beach
Frei, Mary A.	Archer	Alachua
Friedman, Laurie F.	Jacksonville	Duval
Friend, Hattie May	Pehokee	Palm Beach
Fulton, Mary A.	Brooksville	Hernando
Funk, Mrs. Amelia	Pine Castle	Orange
Gardner, Eliza M.	Key West	Monroe
Gardner, June W.	Summerfield	Marion
Garfunkel, Loraine	Miami	Dade
Garnett, Roy Edwin	Hypoluxa	Palm Beach
Gault, Ruby Helen	Arcadia	DeSoto
Gay, Mrs. Thomas J.	Holder	Citrus
Geer, Marion W.	Umatilla	Lake
George, Josie	High Springs	Alachua
Getch, Lucy Belle	Tampa	Hillsborough
Giles, Roger Gay	Umatilla	Lake
Gillis, John A.	Ponce de Leon	Holmes
Gillis, Orene	Ponce de Leon	Holmes
Godwin, Arthur James	Hawthorne	Alachua
Godwin, Gladys	Hawthorne	Alachua
Goethe, M. Francesca	Leesburg	Lake
Goethe, Ruby E.	Jacksonville	Duval
Goette, W. L.	Eustis	Lake
Goldman, Mabel	Ocala	Marion
Goode, Wm. Guerry	Saint Augustine	Saint Johns
Goulding, R. L.	New Smyrna	Volusia
Graham, Angus W.	Sebring	Highlands
Graham, Geo. R.	Lake City	Columbia
Graham, Gladys	Tampa	Hillsborough
Graham, Jane	Gainesville	Alachua

Name	Postoffice	County or State
Gray, Leon Archer	Hinson	Gadsden
Green, Lily	Palatka	Putnam
Grier, Lucie	West Palm Beach	Palm Beach
Haisley, Wayne Glenn	Lake Wales	Polk
Hall, Annie Pearl	Oklawaha	Marion
Hall, Cecil	Hampton	Bradford
Hall, Marslena Ruth	New Smyrna	Volusia
Hammargren, Elizabeth	Gainesville	Alachua
Hammer, Norma Loretta	Miami	Dade
Hamon, Fannie	Homestead	Dade
Hamon, Mrs. Florence Pollard	Gainesville	Alachua
Hamon, Ray L.	Gainesville	Alachua
Hampton, Nettie	LaBelle	Lee
Hargrove, Juanita Cole	Tampa	Hillsborough
Harn, Julia Elizabeth	Gainesville	Alachua
Harp, Alfred W.	Wauchula	Hardee
Harp, Mrs. Martha M.	Wauchula	Hardee
Harrelson, Thelma H.	Summerfield	Marion
Harris, Esther Lee	Gainesville	Alachua
Harris, Martha Floreda	Gainesville	Alachua
Harris, Nannie D.	Winter Park	Orange
Hartley, Lucy	Sutherland	Pinellas
Harvey, Mrs. Irvin	Whitehouse	Duval
Harwell, Hettie R.	Anthony	Marion
Hatcher, Fritz	Gainesville	Alachua
Hawkins, Anna Mae	Alachua	Alachua
Hawkins, John Rex	Groveland	Lake
Hawthorne, Harriet Neal	Hawthorne	Alachua
Haydon, Mrs. Leo G.	Clearwater	Pinellas
Hayes, Calvin B.	Dukes	Bradford
Hayes, Mrs. Calvin B.	Dukes	Bradford
Hazen, Eunice	Brooker	Bradford
Hazen, Lucien	Brooker	Bradford
Hemming, Dorris E.	Wellborn	Suwanee
Hemphill, Kate M.	Evinston	Alachua
Hendricks, Arta Irene	Tampa	Hillsborough
Hendry, Jim	Wauchula	Hardee
Hepburn, Jean	Jupiter	Palm Beach
Herrick, Grace Isabelle	Key West	Monroe
Hester, Fairy	Leesburg	Lake
Hethcox, Ellen Marion	Paisley	Lake
Higginbotham, Vera O.	Sparr	Marion
Hines, Effie	Trenton	Alachua
Hines, Iva	Gainesville	Alachua
Hodges, Corinne E.	High Springs	Alachua
Hogan, Alice	Trenton	Alachua
Hogarth, Leesom Arthur	Stuart	Palm Beach
Holden, Dorothy	Haines City	Polk
Holland, Hurley W.	Gainesville	Alachua
Hood, Gladys B.	Jacksonville	Duval
Horlacher, Marie P.	Jacksonville	Duval
Horrell, Blanche Estelle	Arcadia	DeSoto
Hosack, Lorena L.	Homestead	Dade
Howard, Mary	Sanford	Seminole
Howell, Janie M.	Plant City	Hillsborough
Howell, Mary B.	Wellborn	Suwannee
Hubbell, Julia B.	Bradentown	Manatee
Hudgings, Fannie W.	Melrose	Alachua
Hudgings, Marie	Melrose	Alachua

Name	Postoffice	County or State
Hudgings, Maud S.	Melrose	Alachua
Hudson, Edna Frankie	Trenton	Alachua
Huff, Van Ellis	Gainesville	Alachua
Hughes, Randall Hubert	Ponce de Leon	Holmes
Hughey, Frances May	Sanford	Seminole
Hull, Madge Alice	LaBelle	Lee
Hunt, Deeby A.	Cincinnati	Ohio
Hunter, Frank R.	Fort Myers	Lee
Hutson, Susie Opal	Grandin	Putnam
Ingalls, Flora Anita	Zephyrhills	Pasco
Ingalls, Sylvia	Ocala	Marion
Irwin, Elizabeth	Elberton	Georgia
Ishic, Grace B.	Ellzey	Levy
Jackman, Mrs. Nell Hull	LaBelle	Lee
Jackson, Clara M.	Tampa	Hillsborough
Jauimes, Rose C.	Jacksonville	Duval
Jefferson, Varian Rosalie	Thonotosassa	Hillsborough
Jennings, Lester W.	Gainesville	Alachua
Johns, Allie Lee	Oak	Marion
Johnson, Alvin Joseph	Jennings	Hamilton
Johnson, Amey	Fort Myers	Lee
Johnson, Henry Cecil	Holt	Santa Rosa
Johnson, Mary Lily Augusta	Arcadia	DeSoto
Johnson, Mrs. M. C.	Gainesville	Alachua
Johnson, Roy Edw.	Holt	Santa Rosa
Johnson, Sadie Bell	Floral City	Citrus
Jolly, Ella Belle	Waldo	Alachua
Jones, Lillian	Gainesville	Alachua
Jones, Marshall Gardner	New Smyrna	Volusia
Jones, Olive Edith	Oak	Marion
Jones, Vve	Gainesville	Alachua
Jordan, Lottie Alma	Trenton	Alachua
Keaton, Mrs. Carrie B.	Saint Petersburg	Pinellas
Keen, James Velma	Marianna	Jackson
Kellar, Catherine	Bradentown	Manatee
Kelley, John Grady	Gainesville	Alachua
Kelso, Mabel Marie	Saint Petersburg	Pinellas
Kenedy, James	Jacksonville	Duval
Kennan, Thomas Floyd	Hilliard	Nassau
Kennard, Ruth	Alachua	Alachua
Kennedy, Bessie G.	Lake Butler	Union
Kennedy, May	Lake Geneva	Clay
Kindred, Reba Margaret	Clermont	Lake
Kind, Edward Bascom	Inverness	Citrus
King, Mrs. Lillian H.	Jacksonville	Duval
Kite, Henry Franklin	Live Oak	Suwanee
Knight, Marion B.	Blountstown	Calhoun
Knight, Nannie May	Tampa	Hillsborough
Knight, Varna N.	Tampa	Hillsborough
Koehler, William	Cedar Key	Levy
Kooker, Minerva	Jacksonville	Duval
Kraft, Dorothy C.	Pensacola	Escambia
Kramer, Lillie C.	Leesburg	Lake
Lancaster, Odessa	Trenton	Alachua
Lang, Lucy	Trenton	Alachua
Lazett, Dorothy J.	Lake Worth	Palm Beach
Lee, Graham W.	Bunnell	Flagler
Lee, Ruby M.	Parrish	Manatee
Lee, William J.	Saint Augustine	Saint Johns

Name	Postoffice	County or State
Lence, Norma Gayle	Moore Haven	Glades
Leonard, Lillie May	Dowling Park	Suwanee
Lewis, Pearl	Gainesville	Alachua
Lindstedt, Alice Maril	Hollandall	Broward
Lipscomb, Susan	Auburn	Lee
Livingston, Katherine	Ocala	Marion
Loemecker, Agnes Leona	Homosassa	Citrus
Long, Annie Laurie	Mayo	Lafayette
Love, Faye	Trenton	Alachua
Love, Lily McQueen	Trenton	Alachua
Lovell, Mrs. Myra E.	Pierce	Polk
Lowe, Buena Mae	Key West	Monroe
Luffman, James Leland	Ocala	Marion
Mack, Lila	Reddick	Marion
Maddox, Geneva Agnes	Melbourne	Brevard
Magill, Grace Ellen	LaBelle	Lee
Magill, Inez	LaBelle	Lee
Magill, Maud	LaBelle	Lee
Maines, John Elwood	Lake Butler	Union
Maines, Mrs. O. M.	Louise	Alachua
Malphurs, Coey	High Springs	Alachua
Maney, Ophie	Lakeland	Polk
Manning, Bertie Estella	Palatka	Putnam
Manning, Mildred M.	Anthony	Marion
Mansell, Mrs. Avis A.	Frost Proof	Polk
Marschmer, Louis	Jacksonville	Duval
Marshall, Carl Alexander	Saint Augustine	Saint Johns
Martin, Elijah D.	McMinnville	Tennessee
Martin, Madie Louise	Knights	Hillsborough
Mason, Mittie L.	Orlando	Orange
Matchett, Adeline Rosalie	Citra	Marion
Matchett, Dallas	Citra	Marion
Matchett, Esther Mabel	Citra	Marion
Mathews, Blair Clifford	Alachua	Alachua
Mathews, Mrs. Flora A.	Hawthorne	Alachua
Mathews, John R.	Hawthorne	Alachua
Mathis, Willie Carol	Quay	Saint Lucie
Matthews, Nettie	Ocala	Marion
May, Angus Edward	Bushnell	Sumter
Mayes, Elizabeth F.	Punta Gorda	Charlotte
Meacham, Jo C.	Saint Petersburg	Pinellas
Meadows, Claire	Sparr	Marion
Melton, James E.	Ocala	Marion
Metcalf, Mrs. Willie	Live Oak	Suwanee
Michael, Elizabeth M.	Orlando	Orange
Miley, Mrs. Celia Helen	Sutherland	Pinellas
Miley, Flossie Inez	Plant City	Hillsborough
Miley, Leston	Plant City	Hillsborough
Miller, Erma Mary	Freeport	Walton
Miller, Hattie V.	Leesburg	Lake
Milligan, Hattie	Anthony	Marion
Milligan, Lillian	Anthony	Marion
Mills, Olive J.	Morristown	Levy
Mills, Sarah Alice	Tampa	Hillsborough
Mixson, Marie Ella	Williston	Levy
Moffett, Florence	Arcadia	DeSoto
Moffitt, Marjorie Annie,	Saint Petersburg	Pinellas
Moffitt, Naomi Grace	Saint Petersburg	Pinellas
Moody, Mary E.	Riverview	Hillsborough

Name	Postoffice	County or State
Moody, Mrs. Thirza Lillian	Jacksonville	Duval
Moore, Mrs. D. H.	Clermont	Lake
Moore, Ellis	Milligan	Okaloosa
Morgan, Leazie Irene	Centre Hill	Sumter
Morris, Alton Chester	West Palm Beach	Palm Beach
Morse, Lois C.	Titusville	Brevard
Moyer, Martin Hartwell	Fort White	Columbia
Murphy, Mary Teresa	Jacksonville	Duval
Murphy, Winifred Amelia	Jacksonville	Duval
Myers, Sadie	Avon Park	Highlands
McAllister, Birdie	Palatka	Putnam
McAlpin, Ira M.	Mayo	Lafayette
McArthur, Gertrude	Brewster	Polk
McAteer, Estelle	Ocala	Marion
McBride, Wm. Henry, Jr.	Saville	Volusia
McCaghren, Rachel I.	Live Oak	Suwanee
McCall, Floy R.	Day	Lafayette
McCleutchan, Edna Lula	Arcadia	DeSoto
McCloud, Willie Mae	Pine Mount	Suwanee
McClure, Wanda	Tampa	Hillsborough
McClure, Winifred	Tampa	Hillsborough
McCormick, Katie	LaBelle	Lee
McCormick, Mrs. Mary B.	LaBelle	Lee
McCreery, Mrs. Annie Belle	Tampa	Hillsborough
McCullaugh, Gladys	Hastings	Saint Johns
McCullough, Fay Nella	Hastings	Saint Johns
McDonald, Alma L.	Manatee	Manatee
McDonald, Mary Loyce	Manatee	Manatee
McEwan, R. O.	Newberry	Alachua
McFadden, Mary Lou	Alachua	Alachua
McGehee, Pearl Louise	Juliette	Marion
McGilvary, Ludie	Mulberry	Polk
McInnis, Sam W.	O'Brien	Suwanee
McInnis, Stella	O'Brien	Suwanee
McKay, Glenn E.	Sanford	Seminole
McKay, Mrs. Glenn E.	Sanford	Seminole
McLaughlin, Grace	Columbia	Columbia
McLeod, Irma L.	Arcadia	DeSoto
McMillan, Aueril	Gainesville	Alachua
McNamara, Mary Josephine	Hilliard	Putnam
McNeil, Evelyn Louise	Jacksonville	Duval
McRee, Esther C.	Ellenton	Manatee
Nall, Bernice Clyde	Newberry	Alachua
Nall, Cloyce	Newberry	Alachua
Nash, Anna Elizabeth	Hawthorne	Alachua
Nash, Mary Wilhelmia	Hawthorne	Alachua
Nelson, Clarence William	Titusville	Brevard
Nelson, Irene Bylo	Orange Lake	Marion
Niblack, Charles T.	Dunnellon	Marion
Niblack, Louise Marion	Dunnellon	Marion
Nichols, Cecil Howard	Pinellas Park	Pinellas
Nichols, Robt. C.	Wildwood	Sumter
Niswonger, Iva Helena	Kissimmee	Osceola
Noegel, Molly T.	Madison	Madison
Noland, Clara L.	Fort Ogden	DeSoto
Noyes, Norman Mabel	Lynn Haven	Bay
Nulton, Lucy	Manatee	Manatee
O'Bryant, Horace	Oxford	Sumter
Odom, Emery S.	Munson	Santa Rosa

Name	Postoffice	County or State
Olive, Ollie Mae	Wauchula	Hardee
Ormsby, Hazel Ray	Lakeland	Polk
Osborne, Mrs. Mary Shell	Saint Petersburg	Pinellas
Osgatharp, Harland	Gainesville	Alachua
Osteen, Pearl Alma	Alachua	Alachua
Ottman, Thelma	Saint Petersburg	Pinellas
Owens, Olive Marguerite	Wilcox	Alachua
Parker, Maude Carolyn	Ocala	Marion
Parker, Zelma Lillie	Bartow	Polk
Parrish, Ruby Lee	Lake Butler	Bradford
Parsons, Mary Stoughton	DeLand	Volusia
Pasteur, Caroline	Anthony	Marion
Pate, Ruth	Gary	Hillsborough
Payne, Alva	Lake City	Columbia
Peacock, Avon J.	Plant City	Hillsborough
Pealen, Porter Lee	Red Rock	Santa Rosa
Pease, Mary Dorothy	Key West	Monroe
Pedigo, Louise	Tampa	Hillsborough
Pedigo, Marie	Tampa	Hillsborough
Peeler, Ruth B.	Gainesville	Alachua
Peeples, Lorace Helen	Bowling Green	Hardee
Penuel, Mimms Richard	Lakeland	Polk
Pepper, Ellen S.	Gainesville	Alachua
Perry, Eunice	Oxford	Sumter
Person, Charles Wright	Summerfield	Marion
Peterson, Inez Eva	Morristown	Levy
Peterson, Walter S.	Brooklyn	New York
Pettigrew, Esther C.	Grandin	Putnam
Pickens, Willie McKee	Blountstown	Calhoun
Pickering, Rebecca L., Mrs.	Eastport	Duval
Pierce, James Louis	Marianna	Jackson
Pillans, Lurlene C.	Orlando	Orange
Pinner, Hattie	Ellzey	Levy
Pitts, Henry C.	Holt	Santa Rosa
Platt, Grace Ellie	Plant City	Hillsborough
Plummer, Marguerite Lula	Anthony	Marion
Pomeroy, Helen Dorothy	Orlando	Orange
Pooser, Wankard	Marianna	Jackson
Pope, Charles Edward	Largo	Pinellas
Poppell, Mrs. Louise Cone	Anona	Pinellas
Popplar, Marjorie A.	Safety Harbor	Pinellas
Porter, Annis Elizabeth	Jacksonville	Duval
Potter, Eleanor	Seffner	Hillsborough
Pouder, DeWitt	Cairo	Georgia
Pouder, Madie	Cairo	Georgia
Powell, Blanche Constance	Gainesville	Alachua
Powell, Irma	Terra Ceia	Manatee
Pratt, Adine J.	Leesburg	Lake
Prevatt, John P.	Gainesville	Alachua
Priest, Alma Dell	Anthony	Marion
Priest, Corene Louise	Crystal River	Citrus
Priest, Mrs. Jossie	Tampa	Hillsborough
Pringle, Irene	Tampa	Hillsborough
Pritchard, Rosa Vella	Plant City	Hillsborough
Proctor, Donnie	Ocala	Marion
Pryor, George Washington	Mary Esther	Okaloosa
Purdy, Lillias Josephine	Daytona	Volusia
Ramsey, Louis R.	Washington	Escambia
Rasco, Wendell Fayette	DeLand	Volusia

Name	Postoffice	County or State
Rawls, Lula Dowling	Gainesville	Alachua
Rebo, Barbara N.	Daytona Beach	Volusia
Reed, George Clifford	Georgetown	Putnam
Reed, Harriet Beulah	Jacksonville	Duval
Rencher, B. Orlin	Apopka	Orange
Reynolds, Rosa Fred	Nocatee	DeSoto
Richardson, LeRoy Leak	Evinston	Alachua
Riley, Mrs. A. E.	Punta Gorda	Charlotte
Ringo, Rose Mary	DeFuniak Springs	Walton
Rivero, Edelmisa	Palatka	Putnam
Roberts, Earl Hamby	Lawtey	Bradford
Roberts, Louise	Gainesville	Alachua
Roberts, Verdie Ruth	O'Brien	Suwance
Robertson, Justine	Lakeland	Polk
Robinson, Annie Belle	Melrose	Alachua
Robinson, Anne Elise	Dunnellon	Marion
Robinson, Caroline Adelaide	Dunnellon	Marion
Robinson, Ida Mae	Mango	Hillsborough
Robinson, P. E.	Laurel Hill	Hardee
Robinson, Reda Teressa	Melrose	Alachua
Rodgers, Lillie	Tampa	Hillsborough
Roesel, Tillie Augusta	Bushnell	Sumter
Rogers, Lena	Palma Sola	Manatee
Ron, Irene	Reddick	Marion
Rooks, Earl	Chipley	Washington
Rose, Wm. Lamar	Punta Gorda	Charlotte
Ross, Daisy C.	Williston	Levy
Ross, Mrs. F. L.	Pineland	Lee
Royer, John Whittier	Roanoke	Virginia
Russ, Fletcher Grady	Saint Petersburg	Pinellas
Russ, Mrs. Ila Cora	Saint Petersburg	Pinellas
Ryder, Mabel Beulah	Jacksonville	Duval
Sable, Leona	Dunnelllon	Marion
Salmi, Annie Lydia	Alachua	Alachua
Sample, Mildred	Paisley	Lake
Sanders, Norma Claire	Leesburg	Lake
Sanger, Charlotte E.	Minneola	Lake
Sapp, Xuripha	Chipley	Washington
Sasse, Bertha L.	Starke	Bradford
Saunders, Julian Lamar	Lloyd	Jefferson
Schiller, Katherine Charles	Brooksville	Hernando
Scott, Alma Marjorie	Bessemer	Alabama
Saibel, Mary Ellen	Boynton	Palm Beach
Senge, Norma	Bunnell	Flagler
Sharpley, Sarah Elizabeth	Key West	Monroe
Shealy, Leygia May	Ocala	Marion
Shepard, Walter Clark	Bagdad	Santa Rosa
Sheppard, Annie Laurie	Eustis	Lake
Sherman, John Scott	Miami	Dade
Sherwood, Joslyn B.	Sparr	Marion
Shiver, Pearl	Holt	Okaloosa
Shriner, Charles Henry	Mayo	Lafayette
Shriver, Marguerite A.	Brooker	Bradford
Shull, Emma Louise	Melbourne	Brevard
Simmons, Andrew Carson	Jacksonville	Duval
Simmons, Franklin Pierce	Botts	Santa Rosa
Simmons, G. Ballard	Ponce de Leon	Holmes
Sister Alberta Mary	Orlando	Orange
Sister Joseph Theresa	Jacksonville	Duval

Name	Postoffice	County or State
Sister Mary Annunciata, S. S. J.	Saint Augustine	Saint Johns
Sister Mary Constance	Jacksonville	Duval
Sister Mary Fidelis	Saint Augustine	Saint Johns
Sister Mary Kevin	Saint Augustine	Saint Johns
Sister Mary Regina	Saint Augustine	Saint Johns
Sister Mary Rose de Lima	Saint Augustine	Saint Johns
Skeen, Jimison	Leesburg	Lake
Skinner, Alexander	Umatilla	Lake
Skipper, Vida Letitia	Zolfo	Hardee
Slatten, Warnee Mary	Pensacola	Escambia
Slaughter, Minnie Lee	Newberry	Alachua
Sleap, Eva Russell	Palatka	Putnam
Sligh, Mollie Glasgow	Jacksonville	Duval
Smedley, Mayme E.	Ocala	Marion
Smedley, Thelma Louise	Ocala	Marion
Smith, Clyde Mary	Jennings	Hamilton
Smith, Dorothea Hopkins	Gainesville	Alachua
Smith, E. L.	Ocala	Marion
Smith, Emmie Ellen	Jacksonville	Duval
Smith, Ruth	Graham	Bradford
Smithson, Fannie	Lake City	Columbia
Snipes, Mary Sue	Tampa	Hillsborough
Soper, Beulah	Gainesville	Alachua
Southerland, Ruth Viola	Wauchula	DeSoto
Sparkman, Daisy Belle	Green Cove Springs	Clay
Spear, Albert L.	Gainesville	Alachua
Starbird, Lillian S.	Apopka	Orange
Stark, Barbara	Jacksonville	Duval
Steele, Willard B.	Ocala	Marion
Stephens, Lena	Gainesville	Alachua
Stephens, Mrs. W. H.	Apopka	Orange
Stevens, Wm. Daniel	Jacksonville	Duval
Stewart, Juanita Lenora	Elfers	Pasco
Stewart, Marie Ella	Zephyrhills	Pasco
Stivender, Minerva Drake	Leesburg	Lake
Stokes, Louise	Reddick	Marion
Stoops, Ora Lee	Umatilla	Lake
Stoops, Walter Wesley	Umatilla	Lake
Story, Julia Gretchen	Wacessa	Jefferson
Strange, Beatrice Annette	Jacksonville	Duval
Strange, Irma Lucille	Jacksonville	Duval
Strickland, Annie Mae	Live Oak	Suwanee
Strickland, Ethel Mary	Williston	Levy
Stripling, Pauline	Jacksonville	Duval
Strong, Winnie L.	Hastings	Saint Johns
Summers, Annie Laurie	Lake City	Columbia
Surrency, Vera	Brooker	Alachua
Sweat, Kathleen Marguerite	Green Cove Springs	Clay
Sweeney, Paul Jones	New Castle	Pennsylvania
Tan, Len B.	Canton	China
Taylor, Emmett	Saint Augustine	Saint Johns
Taylor, Lera Hattie	Mayo	Lafayette
Taylor, Martha Eleanor	Gainesville	Alachua
Terry, Selina	Fort White	Columbia
Thigpen, Eleanor Lee	Arcadia	DeSoto
Thomas, Angie Lenora	Bunnell	Flagler
Thomas, Elma	Green Cove Springs	Clay
Thomas, Lacy Glenn	Baldwin	Duval
Thomas, Leno O.	Buckingham	Lee

Name	Postoffice	County or State
Thomas, Thelma Estelle	Brooker	Bradford
Thomas, Wilmer	Gainesville	Alachua
Thompson, Hattie Beatrice	Riverview	Hillsborough
Thompson, Wm. Earl	Tampa	Hillsborough
Thomson, Blair	Gainesville	Alachua
Tiller, Laura Virginia	Kissimmee	Osceola
Tillis, Coralie	Sanford	Seminole
Tison, Rubye Louise	Trenton	Alachua
Tison, Thelma	Earleton	Alachua
Tolbert, Horace Lamar	Fort White	Columbia
Tomkies, Christine	Gainesville	Alachua
Tompkins, Granville Bevill	Center Hill	Sumter
Townsend, Leslie Margaret	Mayo	Lafayette
Townsend, Lewis Franklin	Mayo	Lafayette
Tracy, Roy Ivan	Enville	Hernando
Tucker, David J., Jr.	Williamston	South Carolina
Tucker, Ethel Lois	Gainesville	Alachua
Tucker, Lila King	Madison	Madison
Turbeville, James E.	Gainesville	Alachua
Turner, Cleavy B.	Lake City	Columbia
Turner, Ernest Pomeroy	Trenton	Alachua
Turner, Marcia Carolyn	Rochelle	Alachua
Turner, Thomas A.	Starke	Bradford
Tyler, Laura J.	Summerfield	Marion
Underhill, Arcie Lavina	Fort Myers	Lee
VanLandingham, Nellie	Gainesville	Alachua
Vance, J.	Johnson	Putnam
Villacres, Louis Albert	Guayaquil	Ecuador
Waldron, Willie Catherine	Otter Creek	Levy
Walker, Chas. H.	Lakeland	Polk
Walker, Isabel	Olga	Lee
Walker, Judson B.	Baker	Holmes
Walker, Rosa L.	Lakeland	Polk
Wallace, Elise	Saint Augustine	Saint Johns
Wallace, Viola Ethel	Zephyrhills	Pasco
Wardroper, Jno. H.	Newberry	Alachua
Watkins, Elvira Clara	Sharpes	Brevard
Watkins, Mary Ella	Wauchula	Hardee
Watt, Mrs. Julia	Tampa	Hillsborough
Watson, Huber	Gainesville	Alachua
Watson, Wilma Butler	Gainesville	Alachua
Weathers, Wm. Frank	Saint Augustine	Saint Johns
Webb, Mrs. Edith J.	Palatka	Putnam
Weigle, Mary Beatrice	Fellsmere	Saint Lucie
Welch, Mable Cecilia	Key West	Monroe
Wells, Joel Reaves, Jr.	Panama City	Bay
Wells, Nora	City Point	Brevard
Wells, Wm. G.	City Point	Brevard
Welsh, Lucile Vashti	Melbourne	Brevard
West, Lucy Neal	Jacksonville	Duval
Westbrook, Albert Theodore	Clermont	Lake
Wheeler, Bureon K.	Montverde	Lake
Wheeler, Joseph Augustus	Dowling Park	Suwanee
Wheeler, Joseph Drew	Shelton	Connecticut
Whetstone, Mattie Elizabeth	Fort White	Columbia
Whidden, Sadie Viola	Wauchula	DeSoto
Whidden, Selma Mae	Wauchula	DeSoto
Whidden, Stella V.	Mulberry	Polk
Whitaker, Clarissa	Dunnellon	Marion

Name	Postoffice	County or State
White, Mary Katherine	Lake Park	Georgia
Whitmen, Helen Isabel	Wauchula	DeSoto
Wickline, Bessie	Ocean City	Flagler
Wilber, Marie M.	Green Cove Springs	Clay
Wilder, Maude	Mayo	Lafayette
Wilkes, Florrie Eva	Gainesville	Alachua
Will, Carolyn Louise	Brooklyn	Clay
Will, Kathryn Marie	Brooklyn	Clay
Willcox, Gladys Lorraine	Jacksonville	Duval
Willett, Julius Ernest	Dunnellon	Marion
Williams, Beulah C.	Ellsey	Levy
Williams, Emily Loreue	Crystal River	Citrus
Williams, Emma McGheehee	Venue	DeSoto
Williams, Eva Mae	Hampton	Bradford
Williams, Gertrude Ellen	Hollandale	Broward
Williams, Joseph Edward	Keansville	Osceola
Williams, Mrs. Julia	Jacksonville	Duval
Williams, Leon Lacy	Morriston	Levy
Willims, Lovick Pierce	Gainesville	Alachua
Williams, Rabun Herbert	Alachua	Alachua
Williams, Susie Leo	Venus	DeSoto
Willson, Edward Burnett	Saint Petersburg	Pinellas
Wilson, Clifford P.	Fort White	Columbia
Winfield, May E.	Dowling Park	Suwanee
Witt, Myrtis Leonard	Lake City	Columbia
Womble, Whannie Sue	Apopka	Lake
Wooten, Helen Margaret	Sutherland	Pinellas
Worley, Wm. H.	Hawthorne	Alachua
Wynn, Orabel	Gainesville	Alachua
Yates, Walter S.	Gainesville	Alachua
Youmans, Maybelle	Webster	Sumter
Young, Mary Elizabeth	Jacksonville	Duval
Young, Ruth	Oviedo	Seminole
Zetrouer, Eula	Micanopy	Alachua
Zimmerman, Edith Elizabeth	Arcadia	DeSoto

FARMERS' TEN-DAY SHORT COURSE, JANUARY 3 TO 13, 1922

Name	Postoffice	County or State
Atwater, G. B.	Gainesville	Alachua
Bunger, A. E.	Gainesville	Alachua
Bashaw, Lula C.	Gainesville	Alachua
Baird, Mrs. E. J.	Gainesville	Alachua
Brown, John C.	Gainesville	Alachua
Coleman, Geo. D.	Lisbon	Lake
Cox, F. W.	Gainesville	Alachua
Creary, Mrs. Harry L.	Gainesville	Alachua
Davidson, R. D.	Gainesville	Alachua
DeVane, Connie	Bradentown	Manatee
Dodd, Gordon	Hernando	Citrus
Eshleman, Mrs. J. W.	Burr Oak	Michigan
Green, Chas. F.	Green Cove Springs	Clay
Gunn, Mrs. Annie R.	Gainesville	Alachua
Haley, Mrs. Asa	Interlachen	Putnam
Hill, Mrs. A. E.	Gainesville	Alachua
Hall, Alta Grimm	Gainesville	Alachua
Hawkins, Michael B.	Panama City	Bay
Hamilton, Mrs. Rosa Connor	Conway	Massachusetts

Name	*Postoffice*	*County or State*
Hipson, Anna Trant	Umatilla	Lake
Hipson, Caryl Blaine	Umatilla	Lake
Irvin, H. D.	Callahan	Nassau
Keown, Mary E.	Chicago	Illinois
Lineham, James	Gainesville	Alachua
McKnight, James P.	Volant	Pennsylvania
Morse, Geo. E.	Lancaster	New Hampshire
McIntyre, M. F.	Clearwater	Pinellas
Noble, L. B.	DeFuniak Springs	Walton
Nichols, Mrs. Geo. R.	Interlachen	Putnam
Ogletree, C. M.	Gainesville	Alachua
Odum, Ora	Gainesville	Alachua
O'Neil, J. C.	Gainesville	Alachua
Pomeroy, Russell B.	Green Cove Springs	Clay
Rooks, C. E.	Gainesville	Alachua
Sipprell, Floresa	Palatka	Putnam
Sauls, Walter S.	Gainesville	Alachua
Sanborn, Mrs. N. W.	Gainesville	Alachua
Sanborn, Willard F.	Sodus	Michigan
Stanton, W. W.	Miami	Dade
Taquins, Douglas H.	Jacksonville	Duval
Thorburn, Mrs. W. A.	Interlachen	Putnam
Wienges, Mrs. S. W.	Gainesville	Alachua
Williams, Hattie Lenora	Cantonment	Escambia
Zeigler, Walter James	Buena Vista	Dade

SUMMARY

Graduate School		8
College of Arts and Sciences		300
College of Agriculture—		
College	95	
Two-Year Course	29	
One-Year Course	9	
Four-Month Course	4	
Elementary Vocational Course	137	
		274
College of Engineering		154
College of Law		150
Teachers' College and Normal School—		
College	51	
Normal Training School	27	
Summer School, 1921	783	
		861
Elementary Vocational Course, Radio, Etc.		71
Total Enrollment for 1921-1922		1818
Counted twice		33
		1785
Number attending Farmers' Ten-Day Course		44
Grand Total		1829

SUMMARY BY STATES AND FOREIGN COUNTRIES

	Summer Session 1921	Regular Session 1921-22
Alabama	2	2
Arkansas	0	1
Brazil	0	1
China	1	1
Connecticut	1	1
Cuba	0	2
District of Columbia	0	1
Ecuador	1	1
Florida	765	915
Georgia	4	20
Illinois	0	2
Indiana	0	2
Kentucky	0	3
Massachusetts	1	8
Michigan	1	2
New Jersey	0	1
New York	1	10
North Carolina	0	9
North Dakota	0	1
Ohio	1	0
Pennsylvania	1	4
South Carolina	1	2
Tennessee	1	6
Texas	0	2
Virginia	2	3
West Virginia	0	2
Totals	783	1002
Total for Summer and Regular Sessions		1785

SUMMARY BY COUNTIES

	Summer Session 1921	Regular Session 1921-22
Alachua	137	130
Baker	0	1
Bay	2	8
Bradford	20	10
Brevard	10	10
Broward	4	5
Calhoun	2	6
Charlotte	4	1
Citrus	7	9
Clay	7	6
Columbia	19	8
Dade	11	38
DeSoto	20	11
Dixie	0	2
Duval	45	72
Escambia	5	27
Flagler	4	0
Franklin	0	2
Gadsden	1	14
Glades	1	1
Hamilton	8	4
Hardee	19	7
Hernando	5	5
Highlands	4	11
Hillsborough	46	83
Holmes	5	10
Jackson	4	13
Jefferson	3	8
Lafayette	9	2
Lake	37	17
Lee	19	6
Leon	1	13
Levy	15	5
Madison	5	4
Manatee	13	12
Marion	61	29
Monroe	8	8
Nassau	1	1
Okaloosa	3	15
Orange	13	30
Osceola	4	10
Palm Beach	14	12
Pasco	7	7
Pinellas	24	48
Polk	28	41
Putnam	16	21
St. Johns	17	15
St. Lucie	3	13
Santa Rosa	7	13
Sarasota	3	4
Seminole	11	10
Sumter	14	8
Suwanee	15	10
Taylor	1	0
Union	3	9

	Summer Session 1921	Regular Session 1921-22
Volusia	15	20
Wakulla	0	2
Walton	2	12
Washington	3	16
Totals from fifty-nine Florida Counties	765	915
Totals from other States and Foreign Countries	18	87
Net Totals	783	1002
Total for Summer and Regular Sessions		1785

INDEX

	Page
A.B. Curriculum	52-54
A.B. in Education, Curriculum	143, 144
A.B. in the Social Sciences	51, 52
Absences	29, 30
Academic and Law Degrees, Combined	53
Administration	28
Administration, School	148, 149, 152
Admission	42-46
Admission to the Bar	132
Admission to Law College, change in requirements for	128
Adolescence	149
Adult Specials	33
Advanced Standing	46, 129
Agents' Annual Meetings	109
Agents, Cooperative Demonstration Work	105, 106
Agricultural Club	84
Agricultural Education	93
Agricultural Engineering	82, 92
Agricultural Extension Division	104
Agricultural Journalism	97
Agricultural Organizations, Study of	93
Agriculture, College of	80, 169
Agriculture, Short Courses in	100, 101
Agronomy	91, 156
Algebra	158
Alligator, Florida	42
Alpha Phi Epsilon	67
Alumni Association	40
A.M.	48
American Literature	45, 65
Anatomy	59
Ancient Languages	56
Animal Husbandry, etc.	82, 93
Appointments to Army	167
Arts and Sciences, College of	50
Arts, Mechanic. See Mechanic Arts.	
Assignment to Classes	30
Athletic Association	40
Athletics (See also Physical Education)	28, 74
Attendance (See also Roll of Students)	29
Auditorium	21
B.A. See A.B.	
Bacteriology	60, 61
Band	42
Banking	78
Bar, Admission to	132
Barns	83
Barracks	21
Beef Production	94
Biblical Instruction	58
Biology	59, 158
Board	36
Board of Control	4, 28
Board of Education, State	4
Board, Summer School	4
Botany	59, 99
Boys' Clubs, etc.	110, 111
B.S. Curriculum	55
B.S. Curricula in Agriculture	87-90

PAGE
B.S. Curricula in Education 143, 144, 145
B.S. C. E. Curriculum 115, 116
B.S. Ch. E. Curriculum 118
B.S. E. E. Curriculum 116
B.S. M. E. Curriculum 117
Breeding 94, 96
Breeds of Animals 94
Brooding 95
Buildings 20, 21
Bureau, Teachers' Employment 161
Calendar, University 3
Camps, Summer 167
Campus 19
C. E. 114
Certificates 100, 160
Ch. E. 114
Changes in Studies 31
Charges, University 35
Chemical Engineering 125
Chemical Societies 34, 51
Chemistry 61, 125, 158
Child-Study 150
Choice of Studies 30
Citrus Culture, etc. 98, 99
Citrus Seminar 111
Civics 157
Civil Engineering 119-122
Civil Government. See Civics.
Classes, Assignment to 30
Clubs 110, 111, 173
Coaching. See Sports.
College of Agriculture 80, 169, 170
College of Arts and Sciences 50
College of Engineering 112, 170
College of Law 128, 171
College, Teachers 141, 143, 171
Combined Academic and Law Courses 53
Commissions (in Infantry Reserve Corps) 167
Committees of the Faculty, Standing 14
Community Institutes and Conferences 173
Community Play 174
Composition 45, 157
Conditions 30
Conduct 29, 30
Constitutional Law 70, 135, 136
Contracts 133, 134
Control, Board of 4, 28
Cooperative Demonstration, Farmers' 106
Corn Clubs 110
Correspondence Courses, etc. 172
Cosmopolitan Club 41
Council, University 4, 28
County Agents 105
County Certificates, Teachers' 155
Counties, Attendance by 212
Credit towards Degrees (See also Degrees) 160
Credits for Practical Work 86
Crops 91
Dairy Equipment 82, 83

PAGE
Dairying 95, 108
Deans 28
Debating Council 41
Debating, Honorary Fraternity 67
Deciduous Fruits 99
Degrees 32, 48, 87, 114, 131, 141, 161, 176
Demonstration Agents 105, 106
Demonstration Work, Cooperative 106, 107
Descriptive Geometry 123
Diagnosis, Educational. See Educational Diagnosis.
Diseases of Farm Animals 96
Diseases of Citrus Fruits 99
Dissertation 49
Division of Military Science and Tactics 165
Division of Rehabilitation 169
Donations. See Gifts.
Dormitories 20, 36
Drainage 93
Dramatic Association 42
Drawing 126
Drill 168
Earning Expenses, Opportunities for 37
Economics 78, 79
Education 148-153
Education, Agricultural 93
Education, Vocational. See Vocational Education.
Educational Diagnosis 152
Educational Information Bureau 174
E. E. 114
Electives 44, 143
Electrical Engineering 122
Eligibility to Athletic Teams, etc. 34
Employment Bureau, Teachers' 161
Engineering, Chemistry 125
Engineering, College of 112
Engineering Exposition 67
Engineering Practice 44
Engineering Society, Benton 114
English 45, 64-67, 157
Entrance Requirements. See Admission.
Equipment 19-28, 81-84
Examinations 31, 32, 129
Expenses 35, 37, 131, 160
Experience Required, Practical 87
Experiment Station, Agricultural 102
Exposition, Engineering. See Engineering Exposition.
Expression 67
Extension of Teachers' Certificates 160
Extension Division, General 172
Faculty 5, 29
Failure in Studies 31
Fairs 83
Farm Crops 91
Farm Machinery 92, 93
Farm Management 91
Farmers' Cooperative Demonstration Work 106, 107
Farmers' Four-Month Courses 100
Farmers' Week 100
Farming, Certificates for Work in 100
Farms 81

PAGE
Feeding, Animal 94
Fees. See Expenses.
Fellowships 38
Fertilizers 91
"Fifty-per-cent" Rule 32
Finance 78, 79
Finances (Student Organizations) 34
First Aid to Injured 164
Floriculture 98
Forage Crops 91
Foreign Countries, Attendance from 211
Forestry 99
Forge 126
Foundry 126
French 46, 71
Fruits 98, 99
Furniture 36
Gamma Sigma Epsilon 34
Gardening, Landscape 99
Gas Engines 124
Gears, Valve 125
General Information Bureau 174
Geography, Physical 46
Geology 61
Gifts 15, 22, 85
Girls' Clubs 110
Glee and Guitar Clubs 41
Golf Club 40
Government, Courses in 69
Government of the University 28
Grades and Reports 31
Graduate School 48
Grammar 45, 157
Graphic Statics 120
Grasses 91
Greek 57
Grounds 19
Groups 52
Gymnasium 21
Gymnastics 163, 164
Halls 20, 21
Hazing 29
Health Instruction 163, 164
Heat Engines. See Thermodynamics.
High-School Visitation 161
High-School Problems 150, 152
Highways 120
History 45, 68, 69, 157
History and Philosophy of Education 150
History of the University 16
Home Demonstration 110, 111
Honor Committee 41
Honors 34, 35, 176, 178
Horticulture 97, 99
Hospital 21
Husbandry, Animal, etc. 82, 93, 94
Hydraulics 120, 121
Hygiene, Department of 163
Income 19
Incubation 95

PAGE
Industrial Teachers 153
Industries, Trades and, Curriculum 146, 147
Insects, Citrus 99
Intelligence Test 30
International Law 70, 140
Irregular Students 33
Irrigation 93
J. D. 131
Journalism (See also Agricultural Journalism) 67
Kinematics of Machinery 123
Laboratories 24, 26
Laboratory Fees. See Expenses.
Labor Problems 79
Landscape Gardening 99
Latin 45, 56, 157
Law, College of 128
Law College, change in Requirements for Admission to 128
Law Course, Combined Academic and 53
Lecture, Bureau, etc 174
Lecturers, Special 80
Legumes 91
Libraries 22, 23, 81, 130
Library Work, Agricultural 93
Livestock 83
Literary Societies 51
Literature, English 64-66
LL.B. Curriculum 133-140
Loan Funds 39, 85
Loans and Donations of Farm Machinery 86
Location of University 18
Lodging 36
M.A. 48
M.E. 114
M.S. 48
Machine Design, etc 124
Major (Subject of Study) 52
Management, Farm 91
Management, School 148, 149, 152
Mandolin Club 41
Manual Training. See Mechanic Arts.
Marshall Debating Society 131
Mathematics 45, 70, 71, 158
Mechanic Arts 125, 127, 158
Mechanical Engineering 123, 125
Mechanics, Analytic and Applied 124
Mechanism 123
Medals 35, 178
Medical Treatment 164
Medicine. See Pre-Medical Course.
Meetings 109, 111
Military Science and Tactics 165-169
Milk Inspection, etc 95
Modern Languages 46, 71, 72
Money 78
Motors, Farm 93
Municipal Engineering 121
Museum 23
Music 41, 42, 72
Normal School 155-158
Nutrition, Animal 94

PAGE
Offenses Against Good Conduct 29
Officer in Charge 29
Officers of the University 5
Opportunities for Earning Expenses 37
Oratory. See Public Speaking.
Orchestra 41
Organization 48, 108, 142
Organizations, Student, etc. 40
Parasitology, Animal 97
Patternmaking 127
Peabody Club 142
Peanut Clubs 110
Pedagogy (See also Education) 157
Phi Kappa Phi 34, 178
Philosophy 72, 73
Philosophy of Education 156
Physical Education 74, 163, 164
Physical Examination 74, 164
Physician, University 163
Physics 43, 45, 75, 158
Physiology 59, 60, 96
Pig Clubs 107, 110
Plant Breeding 99
Plant Pathology, etc. 60, 92
Political Science 69, 70
Poultry Culture, etc. 83, 84, 95, 96, 108
Practical Work, Credits for 86
Pre-Medical Course 54
President 5, 28
Prizes. See Honors and Medals.
Projections 123
Property, Value of University 22
Psychology 72, 73
Psychology of Adolescence 149
Public Discussion (Information, Welfare) 173, 174
Public Speaking 67
Publications 42, 104, 111
Quantity of Work 31, 52, 131
Railroads 120
Re-examinations 32
Register 176
Regulations 29, 144, 159, 160
Reinstatement of Student Suspended 32
Related Subjects 146, 147
Remittances 37
Remunerative Labor 85, 86, 142
Reserve Officers' Training Corps 165
Resources. See Income.
Review Courses 157
Reviews and Methods 148, 157
Rhetoric 45, 64
Roll of Students 179
Rural Law 92
Rural Problems 157
Sanitation, Farm 93, 97
Schedules 33, 34
Scholarships 38, 85
School Administration 148, 149
School Management. See Management.

PAGE
Sciences, College of Arts and 50
Secondary Education (See also Education) 15
Seminole 42
Shops 20, 27, 28
Short Courses in Agriculture. See Agriculture.
Smith-Lever Act 107
Social Science. See Sociology.
Societies. See Clubs and Literary Societies.
Sociology 77
Soil Technology, etc. 91, 92
Southern Literature 66
Spanish 46, 72, 158
Speaking, Public 67
Special Students 32, 33
Specifications 121
Sports 40, 74, 75, 163, 164
State Board of Education 4
State Certificates 142, 155, 160
State High-School Visitation 161
Steam Laboratory 125
Strength of Materials 124
Structural Engineering 121
Student Organizations and Publications 40
Studies, Regulations Concerning 30, 159
Summer Camps 166, 167
Summer School, University 49, 159, 196
Supervised Teaching 150, 153
Supervision 29
Surveying 119, 120
Surveys 173
Suspension 32
Swine Production 94
Tactics, Military 165
Taxation 79
Teachers' Certificates. See State Certificates.
Teachers College 141, 143, 171
Teachers' Employment Bureau 161, 162
Teaching, Methods of 148, 150
Teaching, Supervised. See Supervised Teaching.
Technology, Chemical 125
Telegraph and Telephone Engineering 122
Testing Laboratory 121, 122
Thermodynamics 124
Trades and Industries, Curriculum 146
Training Corps, Reserve Officers' 165
Transportation 79
Trucking 98
Tuition Fees 35, 131, 160
Types of Animals 94
Uniform 167
Unit Courses 44
Units, Entrance 43, 44
University Charges 35
University Council 4, 28, 29
University Extension 172
University, History of 16
Value of University Property. See Property.
Valve Gears 125
Veterinary Science, etc. 84, 96
Visitation of High Schools 161

PAGE
Visual Instruction, Bureau of 175
Vocational Education 142, 151, 153, 169, 171
Wood Work, etc 126
Y. M. C. A 40, 41
Zoology 46, 59, 60

University of Florida

GAINESVILLE, FLORIDA

University Summer School

(Co-Educational)

Announcement

June 14 to August 9, 1922

SUMMER SCHOOL

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COMMITTEES OF THE FACULTY

On Buildings and Grounds: Enwall, Perry, Cody, Hamon.
On Admission: Simpson, Leigh.
On Advanced Standing: Roemer, Hathaway, Black, Haynie.
On Public Functions: Bristol, McArthur, Arrington, White.
On Student Publications: Leake, Beck.
On Extension of Certificate: Metcalfe, McMullen, Johnson.
On Recreation: (a) For Women: Borger, Mrs. Roemer, Miltimore.
(b) For Men: White, Manchester, Metcalfe, Woodley.

GENERAL STATEMENT

PURPOSE.—It is the main purpose of the University Summer School to furnish such training as will be most useful to its students in the profession of teaching. A teacher should not only be well versed in subject-matter, but also resourceful in managing a schoolroom or a system of schools. The Summer School attempts to give both kinds of instruction. More specifically, it endeavors to prepare its students for positions as teachers, principals, supervisors, and county or city superintendents of public instruction.

ORGANIZATION.—To this end the work of the Summer School is organized as follows:

1. Normal courses leading to the Normal Diploma.
2. College courses leading to standard college degrees of A.B. and B.S.
3. Graduate courses leading to advanced degrees.
4. Professional courses meeting the requirements for the extension of teachers' certificates with or without further examination.
5. High school courses for mature students and for those who do not have adequate high school facilities at home.
6. Review courses in all subjects required for county, state, and special certificates.

ADMISSION.—Graduates of Standard Junior High Schools, those who have finished the tenth grade of a Senior High School, and teachers who hold a First Grade County Certificate, are admitted to the first year of the Four-Year Normal Curriculum. Graduates of Standard Senior High Schools are admitted to the Freshman Year of the Collegiate Course.

Persons twenty-one or more years of age who cannot satisfy the entrance requirements, but who give evidence of ability to profit by the courses they may take, may, under exceptional circumstances, be admitted as "adult specials."

There are no requirements for admission for those who register merely for review courses.

Students are urged to pursue courses leading to a degree and to have themselves classified when they register. To facilitate proper classification, all students are requested to bring with them their high school diplomas or a statement from their high school principals of the work they have completed. Blank

certificates, conveniently arranged for the desired data, will be sent to all high school principals, and, upon application, to prospective students.

ENTRANCE EXAMINATIONS.—Owing to the large number of summer school students who have not finished high school and, hence, do not have sufficient entrance units to enable them to enter the freshman class, but yet are mature enough to profit by regular college work, arrangements will be made for them to take entrance examinations. All such students should file with the Dean of the Summer School not later than May 20th petitions for examinations in each subject in which they wish to be examined.

DEGREES.—Courses are also offered leading to the degrees of Bachelor of Arts in Education, Bachelor of Science in Education, Master of Arts in Education, Master of Science in Education, and the Normal Diploma. The last named, sometimes called the L. I. degree, is the very least that any teacher should possess. There is considerable agitation in the United States at the present time to make the normal diploma, or its equivalent, the minimum professional training for any teacher. This degree is granted to those students who have finished the second (Sophomore) year's work in Teachers College, with the exception that the foreign language work is elective, and that in the sophomore year Education V*a* and VI*b* are required. For the degree of Bachelor of Arts in Education, the major elective work must be chosen in Groups II and III, or Group II or III; for the degree of Bachelor of Science, from Group IV. For the requirements for the more advanced degrees, the student is referred to the General Catalog, May, 1922.

Authority for the above is provided in Section 5 of Summer School Act as follows:

"All work conducted at the said Summer School shall be of such character as to entitle the students doing the same to collegiate, normal or professional credit therefor, and may be applied towards making a degree."

GROUP SUBJECTS

I.	II.	III.	IV.
Military Science I and II	French	Bible	Agriculture
	Greek	Economics	Astronomy
	Latin	Education	Bacteriology
	Rhetoric and English Language	English Literature	Biology
	Spanish	History	Botany
		Philosophy	Chemistry
		Political Science	Drawing
		Psychology	Descriptive Geometry
		Sociology	Geology
			Mathematics
			Mechanics
			Physics
			Physiology
			Zoology

CURRICULUM

Leading to the Degree of Bachelor of Arts or Bachelor of Science in Education

CONSTANTS.—i. e., subjects required of all students enrolled in Teachers' College.

Physical Education I	1 hr.	Required of Freshmen
Physical Education II	1 hr.	Required of Sophomores
Military Science I	3 hrs.	Required of Freshmen
Military Science II	3 hrs.	Required of Sophomores
English I	3 hrs.	Required of Freshmen
Psychology	1½ hrs.	Required of Sophomores
Educational Psychology	1½ hrs.	Required of Sophomores
Education I	3 hrs.	Year course; required of Freshmen
Education II	3 hrs.	Year course.
or		
Education VIa	1½ hrs.	first Semester
Education IVb	1½ hrs.	second Semester

Either Ed. II or Ed. VIa and Ed. IVb required of Sophomores

Education IIIa	1½ hrs.	Required of Juniors; Sophomores admitted by permission.
Education IIIb or Education IVa	1½ hrs.	Required of Juniors; Sophomores admitted by permission.
Education V	3 hrs.	Required of Seniors; Juniors admitted by permission.
Education XIVb	1½ hrs.	Required of Seniors; Juniors admitted by permission.
Education VIb	1½ hrs.	Required of Seniors; Juniors admitted by permission.

Total, 29 hrs. of constants.

Each student must select courses from three of the following groups:

(See Regulation 2 below.)

A—Ancient Languages	B—Modern Languages	C—English
Required courses: Latin I Latin VI } 6 hours or Latin II Recommended courses: Latin III Latin IV Greek A Greek I or French A French I or Spanish A Spanish I	Required courses: French A French I or Spanish A } 6 hours Spanish I or German A German I Recommended courses: French II Spanish II German II Latin History I English IV, V or VI History IV	Required courses: English I (included among constants) English, 6 hrs. 6 hrs. from one foreign language } 12 hrs. Recommended courses: Other courses in languages and History V.
D—Mathematics	**E—Natural Science**	**F—Social Science**
Required courses: Mathematics I } 6 hrs. Math. III Recommended courses: Mathematics IV 3 hours from a Science Surveying	Required courses: Biology I Biology II Biology III } 16 hours Chemistry I Physics V Recommended courses: Chemistry III Advanced Physics Chemistry V	Required courses: History I History II History III } 15 hrs. Sociology I Economics I Recommended courses: Political Science Biology Psychology Philosophy Economics History Sociology

REGULATIONS

1. All students must take all Constants.

2. Each student must select from three groups of studies from A to F, and must continue in those selected until completion of Sophomore year; at which time a student may concentrate upon two of these groups by permission of the Dean.

3. Where the total number of hours of the three groups combined does not equal 24, additional hours must be taken from the recommended courses in these groups to make the total 24 or more.

4. A total of 68 year hours is required for graduation.

SUMMER SCHOOL CREDIT.—One hour in the Summer School is equivalent to one-fourth year hour as given in the following courses of study. The amount of credit to which the completion of each course will entitle, is given in the description of such courses. No student without special permission of the faculty is permitted to pursue courses that will aggregate more than four and one-half college credits. Exceptionally able students are sometimes permitted to take more than this amount of work, but only with the sanction of the Teachers College Faculty.

The following resolutions, which are primarily intended for students of less than college rank, were adopted by the Teachers College Faculty in January, 1921:

I. Courses to be given in the Summer School shall be designated as (a) Review, (b) Normal, or (c) College.

(a) Courses intended primarily to give a rapid survey of a subject and thus prepare for examination for a Teacher's Certificate.

(b) Courses arranged primarily for pupils unable to offer fourteen college entrance units.

(c) Courses designed primarily for college students (those able to offer fourteen or more college entrance units).

II. All courses (whether Review, Normal, or College) may, if the other regulations be observed, be used towards extension of Teachers' Certificates, provided that at least one course of higher scholastic grade other than those necessary for the certificate, be taken.

III. (a) No credit in college entrance units or in college hours shall be given for successful completion of a "Review" course.

(b) Summer School students offering less than fourteen entrance units shall not, without special permission, be allowed to take more than twenty hours per week. Not more than one entrance unit will be given for work done by "Normal" students at one session of the Summer School. For successful completion of one "Normal" course of study with five recitations per week, one-fourth of one college entrance unit shall be given. One hour of recitation shall be considered equal to two hours of work in laboratory, music, physical education, and drawing.

The Teachers College will accept entrance unit credits only in case an entire course has been completed. Under no circumstances will it accept less than one-half unit in a subject, and one-half units only in subjects so marked in the current catalog. The College will, however, accept one-quarter of a unit when an additional unit or permissible one-half unit is also offered in the same subject, provided the one-quarter unit does not represent duplication of work.

It is recommended that the schedule of classes be so arranged as to make it possible for a student in "Normal" courses to earn two one-quarter units in one subject during one session of the Summer School.

(c) A student able to offer fourteen or more college entrance units shall not, without special permission, be allowed to receive more than four and one-half credit hours or one and one-half college entrance units.

Successful completion of a course of study requiring six class hours per week thruout the Summer School session, will entitle the student to one and one-half college hours; completion of a course re-

quiring four or five hours per week, will entitle to one college hour, and of a class meeting two or three times per week, to one-half college hour; but no credit in hours will be given for a class meeting only once a week. To entitle a student to credit, a course in the Summer School must be approved by the head of the Department in the University most nearly concerned.

STATE CERTIFICATES.—Graduates of the Teachers College and of the Normal School are granted State Certificates without further examination—provided that one-fifth of their work has been devoted to professional training and provided that during each of the last two years of their course they have made a general average of eighty-five on all subjects and have not fallen below sixty in any subject. These State Certificates are converted into Life Certificates in the usual way.

EXTENSION OF TEACHERS' CERTIFICATES

Section 6 of a recent Act of the Legislature provides that:

> All teachers attending any of the Summer Schools herein created and whose work entitles them to credit therefor, upon making proof of the same to the State Superintendent of Public Instruction, are hereby entitled to one year's extension on any Florida teacher's certificate they may hold and which has not fully expired, and such certificate may be extended one year for each succeeding session attended by the said teacher.

REGULATIONS GOVERNING CERTIFICATE EXTENSION

When credit for extension of certificates is desired the following regulations established by the Summer School Board must be followed:

1. No teacher shall be allowed to take more than twenty hours per week of purely academic subjects.

2. No teacher shall take less than five hours per week of professional work.

(Any four or five hour course in education, pedagogy and psychology that has not been taken previously will satisfy the professional requirement necessary for extension of certificate.)

3. The maximum hours per week, including professional, vocational and academic subjects, shall in no case exceed twenty-seven hours per week. Two laboratory hours to be counted as one hour of academic work.

4. No teacher shall take less than fifteen hours per week without special permission.

5. An extra fee of one dollar will be charged for any change of registration after the first week.

With the rapid growth of high schools there is corresponding need of teachers trained in the subjects of higher education and an increasing number are taking college courses to advance and broaden their scholarship. This is as it should be and the ambitious will receive every encouragement from the Summer School.

It is lawful, however, to pursue courses in preparation for taking teacher's examinations for the first time, or for raising the grade of one's certificate, or for the extension of one's certificate. But the Summer School faculty will not recommend students for extension of certificate for repeating courses which they have taken in previous summer sessions or those who are not pursuing courses to raise the grade of certificate already held. At the end of the term the faculty will recommend for extension those that meet the above conditions, and attend the full term, and do work satisfactory to the faculty.

DANCING.—The University of Florida does not feel justified in placing its stamp of approval on the dance as at present practiced. Dancing is therefore forbidden both on and off the campus during the summer season.

ADVANTAGES OF THE UNIVERSITY SUMMER SCHOOL

The advantages that Gainesville presents as the seat of the Summer School are numerous. It is centrally located and easy of access. It has well-paved, lighted and shaded streets, an exceptionally pure water supply, and a good sewerage system. The citizens are energetic, progressive and hospitable. The moral atmosphere is wholesome. The leading religious denominations have attractive places of worship.

The entire equipment of the University is at the hands of the faculty and students. Ample provision is made for intellectual recreation and physical exercise. The Peabody Literary Society meets weekly; lectures or concerts are given frequently; the gymnasium, swimming pool, baseball grounds, and tennis courts are at the disposition of the students, and instructors are at hand to direct athletic activities. The Y. M. C. A. has a fine moving-picture machine, and a large number of

educational and travel films have been procured, as well as some of the best feature films obtainable.

PEABODY HALL.—Peabody Hall, the administrative home of the Teachers College, is a magnificent three-story brick and stone structure. It is modern in every respect as to equipment and arrangements. It contains all the lecture rooms, laboratories and libraries that a modern college of this kind needs.

LIBRARY.—The general library of the University contains about 18,000 volumes of well selected books to which the Summer School students have free access. The Pedagogical library will be of especial interest to them, for it contains many books on educational theory, general and special methods, history of education, psychology and philosophy. In the reading room are more than a hundred of the best general and technical periodicals. Here also are received the leading newspapers of the state and nation.

EDUCATIONAL RESEARCH ROOM.—Room 32, Peabody Hall, is set apart for special and graduate students in Education. This room contains exhibits of many lines of school work; reports and publications of the U. S. Bureau of Education; samples of school texts; Courses of Study; Reports of Superintendents; catalogues of colleges and universities; samples of records and reports, and state school laws. The room is especially rich in material, method and practical operations of mental and educational measurements. Graduate students working on theses will find this room especially helpful and convenient. The equipment is at their service, and individual tables and chairs will be provided.

TEACHERS' EMPLOYMENT BUREAU.—Teachers College and Normal School desires to serve the whole state in every possible way. For this purpose a Teachers' Employment Bureau was instituted and is open thruout the year. From school officials it receives requests for teachers. From teachers it receives requests for information as to vacancies. It files such information and tries, when called upon, to meet the needs of both teachers and school officials. To be of greater service it needs and invites the cooperation of superintendents, principals, and teachers. Officials needing trained men or women, and teachers desiring promotion or change, are asked to call upon the Bureau for its aid. No charges are made for services.

For information, address Dr. Joseph Roemer, University of Florida, Gainesville, Florida.

EXPENSES

Registration fee	$ 2.00
Boarding and lodging in Dormitory per week, in advance	5.25
In advance for the term	40.00
Board without lodging, per week	4.25
Board without lodging for the term, in advance	32.00
Board for children under eight, per week	2.00
Board for children between eight and ten, per week	2.50
Board for children above ten, per week	4.25
Infirmary fee	.50
Library fee	.50
Chemistry Laboratory fee	5.00
Physics Laboratory fee	2.50
Biology, Botany and Zoology Laboratory fee	2.00

Students taking Manual Training and Primary Handwork will have to pay for the material they use. This will not amount to more than 75 and 50 cents, respectively.

There is no charge for tuition. Children under eight years of age will not be admitted to the dormitories, but may dine with their parents in the Commons at $2.00 per week. All accounts are payable in advance.

ROOMS.—Dormitory rooms in Buckman Hall and Thomas Hall are supplied with two good iron bedsteads and mattresses, chiffonier or bureau, a table, washstand and chairs. All students are required to provide for themselves a pillow, bed linen, towels, and other things as they may want for their own special convenience.

Good rooms can be obtained adjacent to the campus at a moderate price. From thirty to fifty new dwellings have been built within three blocks of the campus during the past year, which will greatly increase the rooming facilities for those who cannot obtain rooms in the dormitory. Students desiring to have their rooms reserved in advance, should write at once.

INFIRMARY.—The University maintains a well equipped infirmary and has a professional nurse for those who may be ill during the Summer School.

THE ASSEMBLY.—The assembly will be held on Tuesdays and Fridays at 10 o'clock. At these meetings important announcements will be made and students will be held responsible for all such announcements so made regardless of the fact as to whether they are in attendance at the time.

The following persons will address chapel on these dates:

Friday, June 16	Opening Exercises, President Murphree
Tuesday, June 20	Mr. Hixson
Friday, June 23	Miss Harris
Tuesday, June 27	Supt. Sheppard, Mr. Roemer
Friday, June 30	Mr. Hathaway
Tuesday, July 4	Patriotic Exercises
Friday, July 7	Mr. Bristol
Tuesday, July 11	Mr. White
Friday, July 14	Mr. Woodley
Tuesday, July 18	Mr. Leigh
Friday, July 21	Mr. Leake
Tuesday, July 25	Mr. Beck
Friday, July 28	Mr. Enwall
Tuesday, August 1	Mr. Black
Friday, August 4	
Tuesday, August 8	

AIDS TO REGISTRATION

To make registration easier and to speed it up on registration day, registration forms are shown herein. Read them carefully and fill them out as far as possible before you arrive at Summer School. With your bulletin in hand and forms filled out you can quickly and correctly copy on to the regular cards at the registration desk.

The large card should be filled out in complete detail, especially as to county in which you reside and whether or not you wish an extension of your present certificate, if you have one; in fact the card will be valuable in proportion to the completeness with which it is filled out.

As to the small card, you need to fill out only the blank spaces above and to the right of the heavy line. The rest of it is to be done at the registration desk.

INSTRUCTOR'S COURSE CARD

Students fill in only above and to right of heavy line

Surname First Name Middle Name

Name of Student.....

June.....1922

SUBJECT	Course No.	Sec.	TITLE OF COURSE	INSTRUCTOR

	1	2	3	4	5	6	7	8	Present Certificate	Extension Desired	Certificate Now Sought
Monday											
Tuesday											
Wednesday											
Thursday											
Friday											
Saturday											

Diligence Gr..... Final Gr..... Days Present.....

.....Instructor

UNIVERSITY OF FLORIDA SUMMER SCHOOL

REGISTRATION CARD

Date.....192.....

Surname | First name | Middle name

Home Address: P. O. | County | State

Age | Married? | Have you ever taught?

In case of illness, whom shall we notify?

Address of this person | Is this person your parent or guardian?

What Certificate do you hold? | County in which issued | Date issued

Date of expiration of this Certificate | Do you desire extension of Certificate?

Date of previous extension | Your address while in Gainesville

COURSES

1	4
2	5
3	6

(SEE OTHER SIDE)

I attended .....High School .....Months.

I graduated from.....High School in the year.....

I attended .....Normal School.....Months.

I graduated from.....Normal School in the year.....

I graduated from.....College or University in the year.....

I hold the following degrees.....

Total years taught.....

COURSES OF INSTRUCTION

The following abbreviations used in connection with the courses, indicate the buildings in which the courses are held, and the numbers after such abbreviations indicate rooms in which they are held:

A—Agricultural Building; S—Science; P—Peabody; E—Engineering; L—Language; G—Gymnasium.

AGRICULTURE

ELEMENTARY AGRICULTURE.—A general course in agriculture. This will introduce the student to the study of soils, plants, common diseases of plants, insects, farm crops, domestic animals and the like. Methods of teaching agriculture in rural schools will be stressed. Review and extension credit only. M. W. F. 11:00 E. 15. Mr. Haynie.

FARM MANAGEMENT.—Factors in producing different crops, rotation of crops, system of farming, cost accounting, selection of farms and planning different types of farms. The course is intended to give the student an opportunity to bring to bear on practical problems the information acquired from preceding courses of instruction in agriculture and related subjects. 1½ college credits. Daily 8:00 P. 2. Mr. Haynie.

DAIRY FARMING.—Management of the dairy herd under Southern conditions; study of equipment for dairy farm; locations adapted to dairy farming; method of keeping records and developing dairy herd; pastures, silage and feed crops. 1 college credit. T. Th. S. 11:00. Lab. M. 2-4:00 P. 2. Mr. Haynie.

SWINE PRODUCTION.—Location and equipment for hog farming; management of breeding stock, selection of breeds adapted to the South; study of foodstuff with reference to their adaptability to pork production; slaughtering, curing meats on the farm, and marketing. 1 college credit. M. W. Th. S. 10:00 P. 2. Mr. Haynie.

ATHLETICS

Courses in Coaching

ATHLETICS I.—*Football.*—Elements of the Game.—Its educational values, the rules that govern it, individual and team development, how the game should be played on offense and defense, different systems discussed, how each position should be played on offense and defense, the forward pass, trick and fake plays, the kicking game, psychology and football, plays

suggested. This course will deal with football strategy and its aim is to fit men for coaching football teams. ½ college credit. M. W. F. 4:00 E. 16. Coach Kline.

ATHLETICS II.—*A Talking Knowledge of the Football Game.*—What the rules mean as applied by officials, penalties, good sportsmanship on the side lines, everybody who attends football games should know the essentials of the game play. M. 5:00 E. 16. Coach Kline.

ATHLETICS III.—*Basketball.*—Same course as offered in Course I. Special emphasis will be placed upon the five-man game, on offense and defense, foul throwing, playing the ball, the dribble game, the passing game, long shots, short shots, English, the common-sense system. This course is intended to fit men and women to coach basketball teams. ½ college credit. T. Th. 4:00 E. 16. Coach Kline.

ATHLETICS IV.—*A Talking Knowledge of the Basketball Game.*—Same course as offered in Course II. T. 5:00 E. 16. Coach Kline.

ATHLETICS V.—*Special Course and Lectures Will Be Given in Baseball* if demanded. Hours to be arranged. Coach Kline.

ATHLETICS VI.—Same as Course V for Track and Field Sports. Hours to be arranged. Coach Kline.

Note: Owing to the fact that no money is available to pay for instruction in these courses, a reasonable fee will be charged for each course, payable in advance. A respectable number must enroll to insure the course being given.

FEES—Course I	$20.00
Course II	7.50
Course III	15.00
Course IV	5.00
Course V	10.00
Course VI	10.00

DRAWING, CONSTRUCTIVE WORK AND INDUSTRIAL ART

DRAWING I.—Grades I-III, inclusive. Application of Art to everyday studies; construction work and design; paper cutting, illustration; free-hand drawing; nature study in colors. ½ college credit. M. W. Th. S. 10:00 E. 12. Miss Hopkins.

DRAWING II.—Grades IV-VII, inclusive. Design and applied design; line and shade; theory of color and study of water colors; nature study and still life in color; notebooks kept up to date each week. ½ college credit. M. T. W. Th. 2:00 E. 12. Miss Hopkins.

DRAWING III.—Grades VIII-XII, inclusive. Principles of perspective and line drawing; pencil sketching; five-minute

sketches from life; black and white; charcoal and pencil; water color study and nature study in colors; principles of design and applied design; comparison of notebooks. ½ college credit. M. W. Th. F. 4:00 E. 12. Miss Hopkins.

DRAWING IV.—Grades I to XII, inclusive. Decorative work in enamels; stencilling and handwork that can be useful thruout the grades and high school. ½ college credit. M. T. Th. S. 9:00 E. 12. Miss Hopkins.

EDUCATION

Any 4 or 6 hour course will meet professional requirements for the extension of certificates.

PEDAGOGY.—School management, general and special methods of teaching, elementary principles of child nature, school hygiene and sanitation, personality of teacher, relation of school and community, and other practical pedagogical questions. Review. 1 Normal credit.

Section 1—M. T. W. F. 9:00 P. 25. Mrs. Arrington.
Section 2—M. T. Th. F. 11:00 P. 25. Mrs. Arrington.
Section 3—M. T. W. F. 3:00 P. 25. Mrs. Arrington.
Section 4—M. T. Th. F. 4:00 P. 25. Mr. Draper.

EDUCATION II*a*.—Methods of Teaching the Elementary Branches—In this course emphasis will be placed upon the proper presentation of grammar school subjects. 1½ college credits. Daily 8:00 P. 23. Mr. Woodley.

EDUCATION III*a*.—Administration and Supervision of Village and Consolidated Schools—A course stressing in a practical way problems peculiar to these schools in Florida; their relation to federal, state and local government; the supervising principal, qualifications, relation to superintendent, boards, teachers, pupils, patrons and community; adapting the school to the child's needs, organization, curriculum, attendance, promotions, tests, health work; business practices, school finance, material equipment, school housekeeping, records and reports. 1½ college credits. Daily 9:00 P. 23. Mr. Woodley.

EDUCATION V*a*.—The Technique of Teaching—The laws of learning, lesson-planning, thinking, questioning, the problem-project method, the socialized recitation, democracy in the classroom as a preparation for democracy in life. Textbook: Colvin's "An Introduction to High School Teaching." 1½ college credits. Daily 11:00 P. 17. Mr. Norman.

EDUCATION VI*a*.—Child Study—The nature, growth and

development of the child from birth to adolescence with reference to education; the original nature of the child and his education; the meaning of protracted infancy; training in recognition of types and individual differences, of common defects and how to deal with them; the cultivation of intelligent sympathy with children; the effect of Child Study on the practices of elementary and secondary education. 1½ college credits. Daily 8:00 P. 17. Mr. Enwall.

EDUCATION VI*b*.—Supervised Teaching—This course is planned to give the student practice in conducting recitations under close supervision. A study will be made of the development of courses, and the present status of the subject taught. Lesson plans will be required for all recitations, and the manner of teaching will be subject to criticism. Teaching 4 hours a week; conferences 2 hours a week. 1½ college credits.

Section 1. American History in Secondary Schools. Daily 11:00 P. 23. Mr. Bourne.

Section 2. English in Secondary Schools. Daily 12:00 P. 23. Mr. Woodley.

Section 3. Mathematics in the Secondary Schools. Daily 9:00 E. 17. Mr. Metcalfe.

EDUCATION X*b*.—Rural School Hygiene.—Conditions and forces that affect the physical and mental vigor of children and teachers, and relate the school to the health of the home and community. Location and sanitation of school buildings; hygienic furniture, etc.; diseases and physical defects; medical inspection; hygiene of instruction; teacher's health; play and recreation; teaching of hygiene. 1½ college credits. Daily 12:00 E. 17. Miss McArthur.

EDUCATION XI*a*.—Educational Tests and Measurements—The use of scales for measuring educational products; educational stock-taking. How to determine what kind of a school a community needs, and what progress pupils are making, etc. (Elective for Graduate Students.) 1½ college credits. Daily 8:00 P. 21. Mr. Roemer.

EDUCATION XI*b*.—City School Surveys.—An intensive and analytical study of the principles and practices followed in making the leading City Surveys of the country. Open to advanced students in Education. 1½ college credits. Daily 9:00 P. 20. Mr. Bourne.

EDUCATION XIV*a*.—Junior High School—The purpose of this course is to give principals and teachers a knowledge of

the junior high school and its organization. Since the movement is in its formative period in Florida, much attention and study will be given to concrete cases and local conditions. Topics: Need of reorganization of the traditional high school; changes needed in the program of studies, in discipline, methods of teaching, etc.; development of the Junior High School; special function of the Junior High School; organization, curricula and courses of study, methods of teaching, etc., of the Junior High School. Daily 9:00 P. 21. Mr. Roemer.

EDUCATION XIV*b*.—High School Administration.—This course is designed to study the practical management and administration of the modern high school. It will consider such topics as: duties of principal as head of school; relation of principal to board of education, superintendent, teachers, pupils and community; legal status of high school; systems of financing; selection, supervision, promotion, retention and dismissal of teachers; adjustment of teaching load; testing and grading of pupils; problem of discipline; pupil guidance, athletics, wider use of school plant, supervised study, student activities, teachers' meetings, etc. *(*Junior students may choose between Education XIV*b* and Education III*b.)* 1½ college credits. Daily 8:00 P. 18. Mr. Bourne.

EDUCATION XXI.—Newer Type of Primary School—This course will discuss some recent departures from the traditional and will consider causes for these changes. The course will include organization of the primary school curriculum, and a discussion of the relationship between the kindergarten and primary school. It is planned to meet the needs of teachers of the first four grades. 1½ college credits. Daily 8:00 E. 10. Mrs. Roemer.

EDUCATION XXII.—The Teaching of Primary Reading—This course will discuss the basic importance of reading in the primary school; reading as a tool study; the various methods of teaching reading, etc. Because of the close relation of language as a tool study to reading in the primary school that subject will also be considered in this course. The value of phonics, writing, and also spelling will be considered. 1½ college credits. Daily 9:00 E. 10. Mrs. Roemer.

EDUCATION XXIII.—Hand-work for Primary Grades—The purpose of this course is to develop the real function of handwork in the primary grades. The various types of hand work will be discussed, paper cutting, free hand drawing, clay model-

ing, etc. A constructive project for each grade will be developed during the course. 1 college credit. Daily 11:00 P. 1. Mrs. Roemer.

EDUCATION XXIV. The Teaching of Primary Numbers—This course will consider the broad concept number as it relates to child life; means of working out definite standards of measurement. The four fundamental processes and how to teach them; rapid calculation, etc. This course will lay out the course of study in arithmetic in the first three grades. 1½ college credits. Daily 12 E. 10. Mrs. Arrington.

EDUCATION XXV.—Rural Life Movements.—The opportunity of the rural teacher in reviving, organizing, and directing the life of the rural community will be stressed. The object of the course is to stress the idea that hearing lessons is only a part of the teacher's duty. 1½ college credits. Daily 11:00 E. 10. Miss McArthur.

EDUCATION XXVI.—Rural School Supervision.—A course reviewing the inadequacy of such supervision in the schools of Florida as shown by untrained teachers, and insufficient aid from the County Superintendent's office. Proposed helps—self-supervision, rural school supervisors, helping teachers, etc. Plans for training teachers in service will be discussed—county associations, reading circle work, conference courses, etc. 1½ college credits. Daily 9:00 P. 18. Miss McArthur.

ENGLISH

ENGLISH COMPOSITION.—Review and extension credit only. Four sections:

Section 1. M. T. W. Th. 9:00 L. 12. Mr. Lane.
Section 2. M. T. W. Th. 8:00 L. 25. Mr. Lane.
Section 3. M. T. W. Th. 8:00 E. 16. Mr. Draper.
Section 4. M. T. Th. F. 4:00 P. 17. Mr. Johnson.

ENGLISH GRAMMAR.—Review and extension credit only. Six sections:

Section 1. M. W. Th. S. 10 L. 25. Mr. Lane.
Section 2. M. T. W. Th. 11:00 L. 9. Mr. Lane.
Section 3. M. T. W. Th. 9:00 S. 23. Mr. Draper.
Section 4. M. T. Th. F. 3:00 P. 17. Mr. Johnson.
Section 5. M. W. Th. S. 10:00 L. 12. Mr. Johnson.
Section 6. M. T. W. Th. 2:00 L. 12. Mr. Lane.

ORTHOGRAPHY.—The spelling of common words will be stressed. Correct spelling in all forms of written work will be

demanded. How best to teach spelling. Review and extension credit only. F. S. 11:00 L. 9. Mr. Johnson.

AMERICAN LITERATURE.—Study of American Literature as outlined in Metcalf's "American Literature." 1 Normal credit. M. T. Th. F. 12:00 P. 23. Mr. Woodley.

ENGLISH LITERATURE.—The history of English Literature as outlined in Metcalf's "English Literature" will be given. 1 Normal credit. M. T. Th. F. 2:00 L. 26. Mr. Draper.

RHETORIC.—A general course in composition and rhetoric. 1 Normal credit. M. T. W. Th. 11:00 L. 11. Mr. Johnson.

COLLEGE ENGLISH

ENGLISH I*a*.—Advanced College Rhetoric.—Designed to train students in methods of clear and forceful expression. Instruction is carried on simultaneously in formal rhetoric, in rhetorical analysis, and in theme writing, the constant correlation of the three as methods of approach to the desired goal being kept in view. In addition a reading course is assigned each student. 1½ college credits. Daily 8:00 P. 28. Mr. Hathaway.

ENGLISH I*b*.—Advanced College Rhetoric—This is the work covered during the second semester of Freshman English. It is a continuation of English I*a*. The chapters on Invention in Genung's "Working Principles of Rhetoric" will be studied. A minimum of ten compositions is required. 1½ college credits. Daily 9:00 P. 28. Mr. Hathaway.

ENGLISH III*a*.—Expository Writing—This course is regularly known as Sophomore English. It includes study and practice in writing news items, editorial paragraphs, definitions, reviews, criticisms, formal essays, informal essays, and special feature articles. Some writing will be done for the *Florida Alligator*. Curl's "Expository Writing" and Bleyer's "Special Feature Articles" are the texts. 1½ college hours. Daily 8:00 L. 26. Mr. Beck.

ENGLISH VIII*a*.—Browning—Lectures and written exercises on Robert Browning's poems and dramas. Shorter Poems: My Last Duchess, Abt Vogler, Rabbi Ben Ezra, Childe Harold, Andrea del Sarto, The Laboratory. Dramas: Luria, The Return of the Druses, A Blot on the 'Scutcheon. Graduate credit. Advanced students. 1 college hour. M. T. W. F. 11:00 L. 26. Mr. Beck.

ENGLISH VIII*b*.—Modern Poetry—A study of present-day poems, poets, and poetic tendencies. Both American and Eng-

lish writers are included, and the late Irish school is stressed. The vers libre tendency is studied. Bliss Perry's "A Study of Poetry" is the text. Prerequisite: English I. 1 college hour. M. W. Th. S. 10:00 L. 26. Mr. Beck.

MODERN NOVEL.—A study of the novel since the time of Jane Austen. An intensive course, rather than an extensive. Careful study of Austen's "Pride and Prejudice," Meredith's "Ordeal of Richard Feverel," and Hardy's "The Return of the Native." Discussion of Lewis's "Main Street," Tarkington's "Alice Adams," Ibanez's "Four Horsemen of the Apocalypse," and other later novels. 1 college hour. M. T. W. F. 9:00 L. 26. Mr. Beck.

ENGLISH SV*a*.—American Short Story—An extensive study of the American short-story, beginning with Poe and extending to the current magazine writers. Discussion of various story types and story ideas. Lectures on story technique. Constant use of the library. ½ college hour. Th. S. 9:00 L. 26. Mr. Beck.

FRENCH

FRENCH A*b*.—Elementary French, second semester's course; continuation of French A*a;* grammar, prose composition, reader, oral practice. Fraser & Squair's Shorter French Course; La Belle France. Prerequisite: French A*a* or equivalent. 1½ college credits. Daily 11:00 L. 12. Mr. Manchester.

FRENCH SI*b*.—Second year French, second part. Grammar, prose, composition, reader. Prerequisite: French A and first part of second year French or equivalent. 1½ college credits. Daily 12:00 L. 12. Mr. Manchester.

GEOGRAPHY

POLITICAL GEOGRAPHY.—Special attention will be given to Florida and its relation to other states. A thoro review of the geography of the United States and the world. Instruction will be given in the use of textbooks, maps, globes, industrial products, etc. Review and extension credit only. Four sections:

Section 1. M. W. Th. 10:00 S. 3. Miss Saunders.
Section 2. M. W. F. 2:00 S. 12. Miss Saunders.
Section 3. M. W. F. 3:00 P. 1. Mr. Day.
Section 4. M. W. F. 8:00 P. 1. Mr. Day.

PHYSICAL GEOGRAPHY.—The main features of the ordinary textbook in physical geography will be studied. Along with

this stress will be placed upon the effects the physical features have on man—his commercial and social life. This will be correlated with agriculture. 1 Normal credit. Three sections:

Section 1. M. T. Th. F. 4:00 S. 12. Miss Saunders.
Section 2. M. W. Th. S. 10:00 S. 12. Mr. Black.
Section 3. M. T. Th. S. 12:00 S. 12. Miss Saunders.

HEALTH WEEK

One of the interesting and profitable features of the 1921 Summer School Session will be repeated at the 1922 session. The week of June 19th has been designated as "Health Week," during which time the Florida Public Health Association will have an exhibit of posters and literature illustrating methods of teaching Health and Hygiene. There will also be conferences conducted at convenient hours each day. Representatives will appear at chapel exercises and furnish a series of moving picture entertainments each evening during the week.

HYGIENE

HYGIENE.—Special efforts to impress the teacher with the importance of hygiene and sanitation. How to keep well and physically efficient is the special aim of this course. ½ Normal and extension credit. W. F. 9:00 S. 12. Mr. Black.

HYGIENE I.—Instruction by lecture, recitation and written exercise in general and individual hygiene. Course comprises educational, informational, defensive and constructive Hygiene, with especial reference to infectious diseases, causes, effects and prevention; sex hygiene and social diseases; the general features concerning the destructive agents of health. Required of all first year students. (Acceptable for credit for pre-medical work by the American Medical Association.) ½ college credit. M. T. W. S. 9:00 E. 16. Dr. Sweet.

HYGIENE II.—Instruction by lecture in the common groups that make up the community. Treats of the hygiene of the family, school, industry, farm, institution, and other groups which are typical of every village or town. Elective for all students. ½ college credit. M. W. Th. S. 10:00 E. 16. Dr. Sweet.

HYGIENE III.—Instruction by lecture in the intergroup factors of community, state, nation. Treats of water supply, sewage disposal, garbage disposal, streets, infectious diseases, disinfection, fumigation, clinics and other destructive and constructive elements of community, state and national health.

Elective for all students. ½ college credit. M. W. Th. S. 11:00 E. 16. Dr. Sweet.

MEDICAL ASSISTANCE

CONSULTING CLINICIANS.—Drs. DePass, Smith, Dell, Waldo.

PHYSICAL EXAMINATION.—Regular medical examinations are offered to all students on any day at the regular hours of consultation in the Infirmary. Opportunity is offered for individual and private conference with University Physician, Director of Department or assistants. Drs. Sweet and Tillman.

MEDICAL SERVICE.—University Physician keeps hours daily at University Infirmary for purposes of consultation. Infirmary care is provided for those requiring it. Constant bedside care is given by resident registered nurse. Dr. Tillman and Mrs. Connell.

LATIN

BEGINNER'S LATIN.—Review. Review and extension credit only. M. T. W. Th. 4:00 E. 15. Mr. Buchholz.

CAESAR.—In this course three books will be thoroly studied. Composition. 1 Normal credit. M. T. W. Th. 3:00 E. 15. Mr. Buchholz.

CICERO.—Three or four orations of Cicero with prose composition. 1 Normal credit. M. T. Th. S. 9:00 E. 15. Mr. Buchholz.

VIRGIL.—Three books of Virgil are read and, in addition, prose composition will be given. 1 Normal credit. M. W. Th. F. 8:00 E. 15. Mr. Buchholz.

LATIN SIa.—Selections from Ovid, with a review of the forms and simpler constructions with practice (largely oral) in easy prose composition. If the class prefers, Cicero's De Senectute and De Amicitia will be read instead of the Ovid. Prerequisite: Three years of High School Latin. 1 college credit. M. W. Th. S. 10:00 E. 15. Mr. Buchholz.

LIBRARY SCIENCE

LIBRARY SCIENCE I.—A course designed to help the teacher-librarian in the small high school. The subjects of book selection, the study of reference books and the organization, in a simple way, of the small high school library will be empha-

sized. ½ college credit. M. W. Th. 10:00 P. 28. Miss Miltimore.

MANUAL TRAINING

MANUAL TRAINING I.—Essentials of wood-working—This is an elementary course consisting of two hours of recitation and four hours of shop work per week. It will cover the case and use of the various carpenter's tools, interpretation of simple drawings, practice in the making of the different joints, glueing, finishing, etc. 1 Normal credit. T. Th. 2:00-5:00 P. 9. Mr. Hamon.

MANUAL TRAINING II.—Furniture construction—Prerequisite: Manual Training I or its equivalent. The class will discuss such problems as shop organization, selection of materials, cost accounting, etc. The major requirement of the course will be to design and construct one piece of permanent furniture. Students will have the opportunity of working on the different machines. 1½ Normal credits. M. W. F. 2:00-5:00 P. 9. Mr. Hamon.

MATHEMATICS

ARITHMETIC.—A thoro review of Arithmetic is made, that the student may view it from both the teacher's and child's point of view. Common and decimal fractions, denominate numbers, percentage and all other subjects covered by the textbooks adopted by the state. Principles and methods of teaching arithmetic are thoroly covered. Review and extension credit only. Seven sections:

Section 1. M. T. W. F. 11:00 E. 17. Mr. Cassels.
Section 2. M. T. W. Th. 8:00 E. 17. Mr. Metcalfe.
Section 3. M. W. Th. S. 10:00 E. 17. Mr. Metcalfe.
Section 4. M. T. W. F. 12:00 P. 1. Mr. Day.
Section 5. M. T. Th. F. 4:00 P. 1. Mr. Day.
Section 6. M. T. Th. F. 3:00 E. 17. Mr. Cassels.
Section 7. M. T. Th. F. 5:00 P. 1. Mr. Day.

BEGINNER'S ALGEBRA.—Elementary course covering the fundamental operations, simple and simultaneous equations, factoring and fractions. Review and extension credit only. Three sections:

Section 1. M. T. W. Th. 3:00 P. 20. Mr. Hollingsworth.
Section 2. M. T. Th. F. 9:00 E. 17. Mr. Metcalfe.
Section 3. M. T. W. F. 5:00 P. 20. Mr. Cassels.

ADVANCED ALGEBRA.—Involution, Evolution, quadratic equations, progressions, ratio and proportion. 1 Normal and extension credit. Four sections:

Section 1. M. W. Th. S. 10:00 P. 1. Mr. Hollingsworth.
Section 2. M. T. W. Th. 5:00 E. 17. Mr. Metcalfe.
Section 3. M. T. W. Th. 4:00 P. 23. Mr. Cassels.
Section 4. M. T. W. F. 12:00 P. 20. Mr. Hollingsworth.

BEGINNER'S PLANE GEOMETRY I.—Books I and II. 1½ Normal credits. Daily 8:00 P. 20. Mr. Hollingsworth.

PLANE GEOMETRY II.—Review Course—Review and extension credit only. M. T. W. Th. 2:00 E. 17. Mr. Cassels.

SOLID GEOMETRY.—1½ Normal credits. Daily 9:00 P. 10. Mr. Hamon.

COLLEGE COURSES

PLANE TRIGONOMETRY.—1 college credit. M. W. Th. S. 10:00 P. 21. Mr. Hamon.

COLLEGE ALGEBRA.—Selected topics in Fite's "College Algebra." 1½ college credits. Daily 8:00 L. 23. Mr. Simpson.

PLANE ANALYTICAL GEOMETRY.—The first five chapters of Roberts and Colpitts "Analytic Geometry." 1½ college credits. Daily 9:00 L. 23. Mr. Simpson.

ELEMENTARY CALCULUS.—1½ college credits. Daily 11:00 L. 23. Mr. Simpson.

ADVANCED CALCULUS.—1½ college credits. Daily 11:00 L. 23. Mr. Simpson.

Note: Only one of the Calculus courses will be given. Those desiring either of these should hand their names to the instructor before the beginning of Summer School.

MUSIC

MUSIC I.—Rudiments of Music and Sight Singing. ½ college credit. M. T. W. Th. 2:00 E. 10. Mrs. Wall.

MUSIC II.—Sight Singing and methods of teaching public school music in the primary grades. ½ college credit. M. T. Th. F. 3:00 E. 10. Mrs. Wall.

MUSIC III.—Advanced Sight Singing: Two, three and four part music; methods of teaching public school music in all grades. Elementary theory and harmony and simple composition. ½ college credit. M. T. W. F. 4:00 E. 10. Mrs. Wall.

Chorus and glee club work will also be offered.

NATURAL SCIENCE

HIGH SCHOOL BOTANY.—A general introduction to plants—characteristics of important families, pollination, classification. Some of the lower forms of plant life will also be studied. 1½ Normal credits. Recitation W. Th. F. 3:00; Laboratory M. T. W. 4:00-6:00 S. 3. Miss Borger.

HIGH SCHOOL PHYSICS.—A general course, such as is usually given in standard secondary schools—lectures, recitations, demonstrations, and a limited amount of individual laboratory work. 1½ Normal credits. M. W. Th. S. 10:00 E. 33. Laboratory W. F. 4:00-6:00 E. 33. Mr. Perry.

GENERAL SCIENCE.—A course in General Science designed especially to meet the needs of high school teachers. 1 Normal credit. M. T. W. F. 8:00 S. 12. Miss Saunders.

HIGH SCHOOL ZOOLOGY.—An introductory course to the general principles and concepts of animal life. The laboratory work includes observations and dissections of invertebrates and vertebrates. 1 Normal credit. Recitation M. T. 3:00; Laboratory Th. and F. 4:00-6:00 S. 3. Miss Borger.

BIOLOGY X.—Plant Pathology—This course is designed to determine the causal agents, symptoms, diagnosis and treatment of the principal truck and citrus diseases. Some study will be given to the morphology and cultural characteristics of the causal organisms. Prerequisites: Biology IX and XI. 1½ college credits. M. W. 3:00, Laboratory M. T. W. Th. 4:00-6:00 S. 23. Mr. Cody.

BIOLOGY XII.—Agricultural Bacteriology—Relation of bacteria to milk and its products; communicable diseases on the farm; soil bacteria and their influence on soil fertility. Prerequisite: Biology XI. 1½ college credits. T. Th. 3:00, Laboratory M. T. Th. F. 4:00-6:00 S. 23. Mr. Cody.

BIOLOGY IX.—Plant Physiology—This course will include the physiological functioning of roots, stems, leaves, etc.; also some of the chemical and physical changes therein. 1½ college credits. Prerequisite: Chemistry I and Biology II. M. W. 2:00. Laboratory M. T. Th. F. 4:00-6:00 S. 23. Mr. Cody.

CHEMISTRY

CHEMISTRY I.—General Chemistry—A course designed for those who wish to prepare for science teaching in the high school. This course can be taken by those who have never taken chemistry before or by those who have had a course

before and wish to review it. There will be two courses in General Chemistry, one embracing non-metals and one embracing metals. The former is a prerequisite to the latter.

Section 1. Equivalent to first semester of Chemistry I. 2½ college credits. Daily 9:00 Lab. M. T. W. Th. 2:00-4:00 S. 3. Mr. Leigh.

Section 2. Equivalent to second semester of Chemistry I. 2½ college credits. Daily 11:00 Lab. M. T. W. Th. 2:00-4:00 S. 12. Mr. Black.

CHEMISTRY III.—Qualitative Analysis—A laboratory course in this subject offered to those who have had general chemistry. 1½ college credits. T. Th. 2:00, Lab., M. T. W. Th. 2:00-5:00 S. 3. Mr. Leigh.

CHEMISTRY VII*b*.—Gravimetric Analysis—A laboratory course offered to those who have had Qualitative Analysis. 1½ college credits. Laboratory afternoons 2:00-5:00, days to be arranged. S. 12. 12 hours per week. Mr. Black.

CHEMISTRY VII*a*.—Volumetric Analysis—A laboratory course offered to those who have had Qualitative Analysis. 1½ college credits. Laboratory afternoons 2:00-5:00, days to be arranged. S. 12. 12 hours per week. Mr. Black.

CHEMISTRY V.—Organic Chemistry—This course is designed to present the fundamentals of chemistry of the compounds of carbon. The work in the classroom is presented by means of lectures, quizzes, and oral and written recitations. 2½ college credits. Daily 11:00, Laboratory 2:00-6:00 S. 3, days to be arranged. Mr. Leigh.

PHYSICS

GENERAL PHYSICS.—A course designed for those who wish to prepare for science teaching in the high school or for those who wish to take a course in general physics more extensive and more mature than that offered in the elementary course. This course may be taken by those who have had no previous work in physics but, in that case, V*a* must be taken as a prerequisite to V*b*.

PHYSICS V*a*.—Mechanics and Heat. 2 college credits. Daily 11:00 E. 33. Lab. T. Th. 2:00-4:00. Mr. Perry.

PHYSICS V*b*.—Sound, Light and Electricity—2 college credits. Daily 9:00 E. 33; Lab. T. Th. 2:00-4:00. Mr. Perry.

PHILOSOPHY AND PSYCHOLOGY

ELEMENTARY PSYCHOLOGY.—A beginner's course in psychology with applications to teaching. 1 Normal credit. M. W. Th. S. 10:00 P. 25. Mr. Draper.

PHILOSOPHY I*a*.—General Psychology—Facts and theories current in general psychological discussion: the sensations, the sense organs, and the functions of the brain; the higher mental functions—attention, perception, memory, feeling, emotion, volition, the self; and like topics. This course satisfies the professional requirement for the extension of certificates. 1½ college credits. Daily 9:00 P. 17. Mr. Enwall.

PHILOSOPHY IV*a*.—History of Ancient Philosophy—The development of philosophic thought from its appearance among the Ionic Greeks to the time of Descartes. Special attention will be given to the philosophy of Plato and Aristotle. 1½ college credits. Daily 12:00 P. 17. Mr. Enwall.

PHYSICAL EDUCATION

A course designed to meet the needs of teachers, who, tho not graduates of Physical Education, are expected to have a practical knowledge of, and ability to teach Physical Training in the public schools. Local problems of those in classes will be met as far as possible and schedules formed for the gradual betterment of physical conditions and defects as found among the children of our schools. The aim of this department is to have as many leaders in every community and district as possible, for leadership in playground and school activities.

THEORY

Its relation to health and efficiency; place in curriculum, administration in schools, physical diagnosis and examination. Management of gymnastic material, exercises and games. Growth and development of individual. General topics in exercises discussed from standpoint of the teacher. Education and Ethical Value of Play. Organization and Equipment of Playgrounds. Choice and Classification of Games and Sports for Playground use. Coaching of Teams and Games and Sports.

PRACTICE

GYMNASTICS.—Free standing exercises, calisthenics, marching tactics and apparatus work.

GAMES AND PLAYS.—Especially designed for use in schools, playgrounds and recreation centers.

PHYSICAL EDUCATION I.—Elementary Gymnastics—This class is for beginners and consists mainly of marching, calisthenics and simple apparatus work. Exercises applicable for school room will be given in graduated scale leading up to the more advanced form of exercise. ½ college credit. Section 1—Men M. W. Th. S. 10:00; Section 2—Women M. T. W. Th. 4:00 Gymnasium. Mr. Manchester.

PHYSICAL EDUCATION II.—Advanced Gymnastics—This is for those who have had work either in Course 1 or have made progress in the work elsewhere. This work will consist of advanced floor and apparatus work. ½ college credit. Section 1—Men M. T. W. Th. 11:00; Section 2—Women M. T. W. Th. 5:00 Gymnasium. Mr. Manchester.

PHYSICAL EDUCATION III.—Physiology—A course not going into detail nor for review but to better enable the teacher or leader to recognize faulty conditions and have an intelligent use of natural and artificial methods for correction thru exercise. Action, use and relation of different organs of body and exercises to stimulate and normalize them. General laws governing the body and health. ½ college credit. Section 1—Men F. S. 9:00; Section 2—Women M. W. 9:00 Gymnasium. Mr. Manchester.

PHYSICAL EDUCATION IV.—Anatomy—An elementary course in bony structure, muscles and important nerves in their relation to physical education. Not a review course. ½ college credit. F. S. 11:00 Gymnasium. Mr. Manchester.

PHYSICAL EDUCATION V.—Major Sports—Classes will be organized in the following: Basketball, track, baseball and volley ball with reference to coaching, training, diet and managing. ½ college credit. M. T. W. Th. 2:00 Gymnasium. Mr. Manchester.

PHYSICAL EDUCATION VI.—Minor Sports—All games and competition between individuals and teams not representing major sports. Mass play and its importance in school and playground curriculum. How to organize and carry on minor sports, rules and organization governing them. ½ college credit. M. T. W. Th. 3:00 Gymnasium. Mr. Manchester.

PHYSICAL EDUCATION VII.—General playground and social hour, 7 P. M. This will be given on the campus and is open to everyone. Mr. Manchester, Mr. White.

Note.—All ladies will be required to have middies, bloomers and tennis shoes. It is recommended the middies be white and bloomers dark color.

All men will be required to have baseball trousers or white duck pants, gym shirt and tennis shoes. White gym shirts and white duck pants preferable.

PUBLIC SPEAKING

On account of limited funds, a nominal fee will be charged for the following courses:

EXPRESSION AND PUBLIC SPEAKING.—In the courses offered particular attention will be given to establishing a correct method of breathing, to correcting faulty articulation, and to teaching the principles of interpretation by voice, gesture, and facial expression. In these studies special attention will be given to preparing teachers for carrying on this work in the public schools. Those interested see Professor J. M. Chapman. Law Building. Hours to be arranged.

SOCIAL SCIENCES

CIVICS.—Special attention will be given to local, town, city, and county governments. Information that every intelligent citizen should have is stressed. Five sections. Review and extension credit only.

Section 1. M. W. Th. 10:00 P. 23. Mr. Willett.
Section 2. M. W. F. 11:00 P. 20. Miss Carmack.
Section 3. T. W. F. 2:00 P. 23. Miss Carmack.
Section 4. W. Th. F. 3:00 L. 9. Mr. McMullen.
Section 5. M. W. S. 10:00 L. 23. Mr. McMullen.

FLORIDA HISTORY.—State-adopted textbook will be covered. Review and extension credit only. M. W. 10:00 P. 17. Miss Carmack.

ELEMENTARY UNITED STATES HISTORY.—Six sections, each covering thoro review of State-adopted textbook. Review and extension credit only.

Section 1. M. T. Th. F. 8:00 L. 9. Mr. Willett.
Section 2. M. T. Th. F. 9:00 L. 25. Mr. McMullen.
Section 3. M. T. Th. F. 2:00 L. 25. Mr. McMullen.
Section 4. M. T. Th. F. 3:00 L. 25. Miss Carmack.
Section 5. M. T. W. F. 12:00 L. 9. Mr. Willett.
Section 6. M. T. Th. F. 11:00 L. 25. Mr. Willett.

HISTORY.—Ancient—1½ Normal credits. Daily 8:00 L. 12. Mr. McMullen.

HISTORY.—Medieval and Modern—1½ Normal and extension credits. Daily 9:00 P. 1. Miss Carmack.

HISTORY.—English—1 Normal and extension credit. M. T. W. Th. 2:00 L. 10. Mr. Willett.

HIGH SCHOOL HISTORY.—American—1 Normal and extension credit. M. T. Th. F. 11:00 P. 23. Mr. Bourne.

HISTORY AND POLITICAL SCIENCE

THE RENAISSANCE AND THE REFORMATION.—This course covers an important period in the history of European civilization. The political, intellectual, literary and aesthetic phases of the great Italian Renaissance and its effect on the main European states are studied. Special stress is laid on the influence of the movement upon European life and culture. The more important phases of the Protestant Reformation—especially the work and influence of Luther, Zwingli and Calvin—are examined and the political and religious outcome of the movement receives careful analysis. 1½ college credits. Daily 9:00 L. 10. Mr. Leake.

COLLEGE UNITED STATES HISTORY, 1830 TO 1876.—The historical background of the War between the States, the main events of that momentous struggle between the Sections, and the period of Reconstruction, and the "Restoration of Home-Rule" to the Southern States furnish the material for this course. 1½ college credits. Daily 11:00 L. 10. Mr. Leake.

AMERICAN GOVERNMENT AND POLITICS.—A thoro analysis of the institutions and political practices of the United States, together with a brief examination of the fundamental features of our State and local government will constitute the work of this course. Emphasis will be laid on constitutional questions and on present-day political problems. This course will be helpful to teachers of Civics. 1½ college credits. Daily 8:00 L. 10. Mr. Leake.

RELIGIOUS AND SOCIAL SERVICE

GEORGE E. WHITE, General Secretary Y. M. C. A.
Director Department of Religious and Social Service

Under this department the general program of the Young Men's Christian Association, as rendered in the last two years, will be continued. This is not a new department, but it places

the department under a more definite plan in order that it may serve the student life in a better way.

All the other social organizations on the campus, and the County Clubs, will be organized through this department. Every phase of social life will be encouraged. The following is the general program in the

RELIGIOUS DEPARTMENT

Sunday, 7 P. M.—Vesper Services.
Tuesday, 10 A. M.—Chapel.
Wednesday, 7 P. M.—Devotional Services.
Friday, 10 A. M.—Chapel.

SOCIAL DEPARTMENT

Cooperating with the Department of Physical Education.
Monday, 4:00-6:00 P. M.—Plays and games on campus.
Tuesday, 8 P. M.—Moving pictures in Gymnasium.
Wednesday, 4:00-6:00 P. M.—Plays and games on campus.
Thursday, 8 P. M.—Peabody Club.
Friday, 8:00-11:00 P. M.—Socials in Social Hall and Gymnasium.

SOCIOLOGY AND ECONOMICS

The work of this department for the summer session has in view the needs of several groups: first, regular college students planning to enter business or public service; second, graduates of business colleges who desire advanced work in business training; third, high school teachers who are giving or plan to give courses in Sociology and Economics, and fourth, those engaged in business who cannot get away for longer than a month. The courses in Accounting and Transportation have been made possible only through the cooperation of the General Extension Department of the University, and those of the last mentioned class will be permitted to continue their work by correspondence. College credit, however, will be given only to those duly qualified, and after the work has been completed.

SOCIOLOGY I*a*.—A study of the factors and forces that make for social efficiency and social progress. 1½ college credits. Daily 8:00 L. 11. Mr. Bristol.

ECONOMICS B.—The development of our industrial system; nature and scope of the productive process; the different agents in production; productive efficiency; forms of indus-

trial organization; problems of finance and management. 1½ college credits. Daily 9:00 L. 11. Mr. Bristol.

ECONOMICS XI*a*.—Elements of Accounting. 1½ college credits. M. W. F. 11:00; Lab. M. W. F. 4:00-6:00 P. 18. Mr. Hart.

ECONOMICS XI*b*.—Advanced Accounting—A continuation of the preceding course, but open to those who have had bookkeeping or elementary accounting. T. Th. S. 11:00; Lab. T. Th. F. 2:00-4:00 P. 18. 1½ college credits. Mr. Hart.

ECONOMICS III*b*.—Transportation—A study of the nature, history and problems of transportation. Open to advanced students who have had one course in Economics. 1½ college credits. M. W. Th. 10:00; Lab. M. 2:00-4:00 T. Th. 4:00-6:00 P. 18. Mr. Hart.

SPANISH

SPANISH A*a*.—Elementary Course—Pronunciation, forms, elementary syntax, dictation, written exercises, memorizing of vocabularies. 1½ college credits. Daily 11:00 P. 28. Mr. Hathaway.

SPANISH I*a*.—Intermediate Course—Work of Elementary Course continued, advanced grammar, including syntax, prose composition. 1½ college credits. Daily 9:00 L. 9. Mr. Manchester.

ROOMS

All who expect to occupy dormitory rooms, which in every case are comfortable and commodious, should make reservations as soon as possible. If for sickness or other reasons a student finds it impossible to come to the Summer School, reservation should be cancelled so that other students may have an opportunity to occupy the room that has been reserved.

For room reservations and general information as to the Summer School, address

J. W. NORMAN,
Dean of Teachers College,
Gainesville, Fla.

University of Florida

Gainesville, Florida

Normal School and Teachers College

REVIEW COURSES

A ONE-YEAR COURSE

A TWO-YEAR ELEMENTARY PROFESSIONAL COURSE

REGULAR FOUR-YEAR NORMAL COURSE

COURSES LEADING TO AN A. B. DEGREE IN EDUCATION

COURSES LEADING TO A B.S. DEGREE IN EDUCATION

COURSES LEADING TO GRADUATE DEGREES

THE SUMMER SCHOOL

For information write,

J. W. NORMAN, *Dean*

A STUDY OF THE CONDITIONS OF THE RURAL SCHOOLS IN PENINSULAR FLORIDA

By

GERTRUDE McARTHUR, A. M.
Rural School Supervisor, Duval County
Jacksonville, Florida

THE UNIVERSITY OF FLORIDA
TEACHERS COLLEGE
GAINESVILLE

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Gertrude McArthur

TABLE OF CONTENTS

PREFACE 5

CHAPTER I

Introduction

PURPOSE OF STUDY 7
METHOD OF PROCEDURE 7
TERRITORY COVERED 7

CHAPTER II

Educational Development in Florida

A. EDUCATIONAL BEGINNINGS 10
1. Educational Society formed in 1831 10
2. Private Fellenberg Schools at Tallahassee and St. Augustine in 1832 10
3. Early legislation 11
4. Public school, Tallahassee, 1852 12

B. ESTABLISHMENT OF STATE SCHOOL SYSTEM 12
1. Funds for support of school 12
(a) Government land grants 12
(b) Mill assessment on property 13
2. First course of study 14
3. Certificate regulations 14

C. TRAINING SCHOOLS FOR TEACHERS 15
1. Normals 15
2. High school teacher training departments 15
3. Teachers' colleges in State schools 16

CHAPTER III

Rural Situation in the United States

A. FACTORS INFLUENCING 17
1. Home 17
(a) Parental sympathy is not lacking 17
(b) Lack of spending money 21
(c) No satisfying community pastimes 22
2. School 23
(a) Teachers untrained 23
(b) Consolidation needed 26
(c) Boarding conditions 28
(d) Lack of community spirit for the school and teacher 28
(e) Health conditions a menace 29

3. Church 30
(a) Ministers cling to the towns and go into the rural districts just to deliver sermons with no rural application 30

B. Means of Improving Conditions 33
1. Enforce attendance 33
2. Use standard curriculum but make local and general application 35
3. Secure trained teachers with rural vision 37
4. Give furnished homes to teachers 38
5. Keep teachers from year to year as community cooperators 39
6. Cooperate with County Agents and Home Demonstration Agents 40

CHAPTER IV

Florida Rural Schools

A. What Florida Schools Have 42
1. Waste 42
2. Superintendents with urban vision or no vision 44
3. Untrained itinerant teachers 48
4. Suitcase teachers 51
5. Poor boarding conditions for teachers 53
6. Narrow, isolated patrons 54
7. Underfed and diseased children 54

B. What They Need 56
1. Enforced attendance 56
2. Closer expert supervision 58
3. Rural consolidation 60
4. Cooperation with County Agent and Home Demonstration Agent 62
5. Efficient, trained, satisfied teachers 64
6. Teacherages 66
7. School activities leading children to beautify their homes 66
8. Organized and directed play 67
9. Parent-Teacher Associations 68

C. Summarized Comments 69

D. Questions, Tabulated Replies and Graphs 71

CHAPTER V

Conclusion 78

Bibliography 80

PREFACE

My early schooldays in a rural school filled me with sympathy for children of today in like conditions, and my real love for the rural field inspired me to make rural problems my life's work. In order to know the weakness of Florida's rural school system and to be able to suggest the means whereby this weakness might be met and the system be made a training department for a safe rural democracy, I was forced to make a personal survey from county to county to get the problems of the various localities. These problems have been studied and means for solutions suggested.

This thesis was written in 1921, in partial fulfillment of the requirements for the degree of Master of Arts in Education at the University of Florida. At first the writer did not intend to have it published, but the faculty of Teachers College, at the University, felt that it contained valuable first-hand material of the real conditions as they exist today in the rural schools of Florida—conditions with which few are really acquainted. It is given to the public with a hope that it may help to arouse sufficient interest to make the rural cause the concern of every patron of the public schools.

All parts of this booklet will not be of the same interest, perhaps, to all who read. The educator, who is interested in Florida's problems from every source, will read all of it. The first chapter gives why it was written and how the facts were obtained. The second chapter states briefly the history of the first schools of Florida and their development up to the present day system. The third chapter gives the rural conditions that are found in the home, school and church in the United States at large. The writer states the conditions and the means for improving them. Every one who possesses any state pride will read the fourth chapter, for in it Florida's problem is stated. The different localities are studied separately, the conditions that govern school opportunities are recognized, and a program to meet the demands for the best rural sections is suggested. Chapter five gives the conclusion in which the writer shows Florida's gain in school enrollment, in salaries paid to teachers, in assessed valuation of

property, and in bank deposits. Florida's sources of wealth or ready money are shown. The effect of the tourists on the school system is brought out. The last paragraph sums up the agencies that determine the rating of Florida's schools and then suggests that this rating can be changed only through legislation.

The writer expresses here her indebtedness to the various county superintendents and to the late State Superintendent, W. N. Sheats, for so kindly answering her inquiries, and also to State Rural School Inspector, R. L. Turner, for access to his files to check over her data, and for many helpful suggestions. To Dr. Joseph R. Fulk for his wise directions and for his painstaking interest that it might be a success, to Miss Florrie Wilkes for aid in making the graphs and checking material in its final form, and to Miss Cora Miltimore, University Librarian, for untiring efforts to aid in getting material and for her cooperation and sympathy, the writer makes grateful acknowledgment.

GERTRUDE MCARTHUR.

November, 1922.

CHAPTER I

Introduction

The purpose of making this study was to secure reliable information on the general character of the rural schools of peninsular Florida, together with first-hand knowledge of some of the conditions contributing to the home and school environment of these pupils and their teachers. The first effort to obtain this knowledge was by means of a questionnaire. This did not prove successful because the replies were not definite enough. These questionnaires were addressed to the superintendents, most of whom replied, but with answers so incomplete and varied that a personal visit to each county was planned, and an attempt was made to get material first hand.

This study deals with peninsular Florida, which includes the twenty-eight counties south of the 30th parallel. The northern tier of counties includes St. Johns, Putnam, Alachua and Levy. (See map, pages 8 and 9.) There were only twenty-five counties visited, but the three not visited—Monroe, Okeechobee and Pinellas—have conditions similar to those found in the other counties visited.

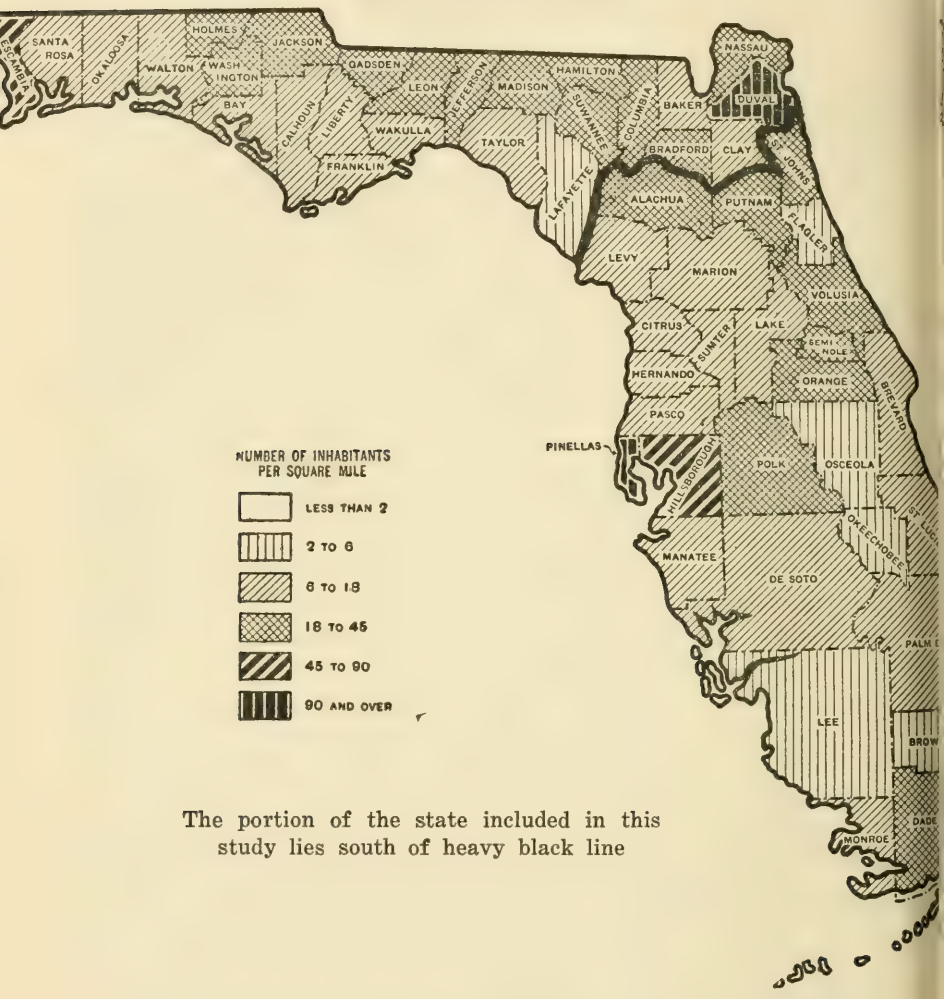
Peninsular Florida presents different problems from northern and western Florida, the latter being a more distinctly farming section, while the former presents more varied interests.

The extreme southern part has thousands of acres of waste land occupied only by an occasional settler. These districts are mostly cattle ranches. Polk, DeSoto and Lee Counties each have numbers of townships of this waste land. The Superintendents of schools of these counties estimate that there are about two hundred children in these districts who have no school opportunities. They live mostly on lakes which are numerous in these counties. A goodly number of the parents of these children are fishermen. In order to have school privileges, these children must be sent away from home or a private teacher employed. Few of these parents are able to provide either facility.

DENSITY OF POPULATION OF FLORIDA, BY COUNTIES, 1920

Rural population is defined as that residing outside of incorporated places having 2,500 inhabitants or more

TOTAL POPULATION



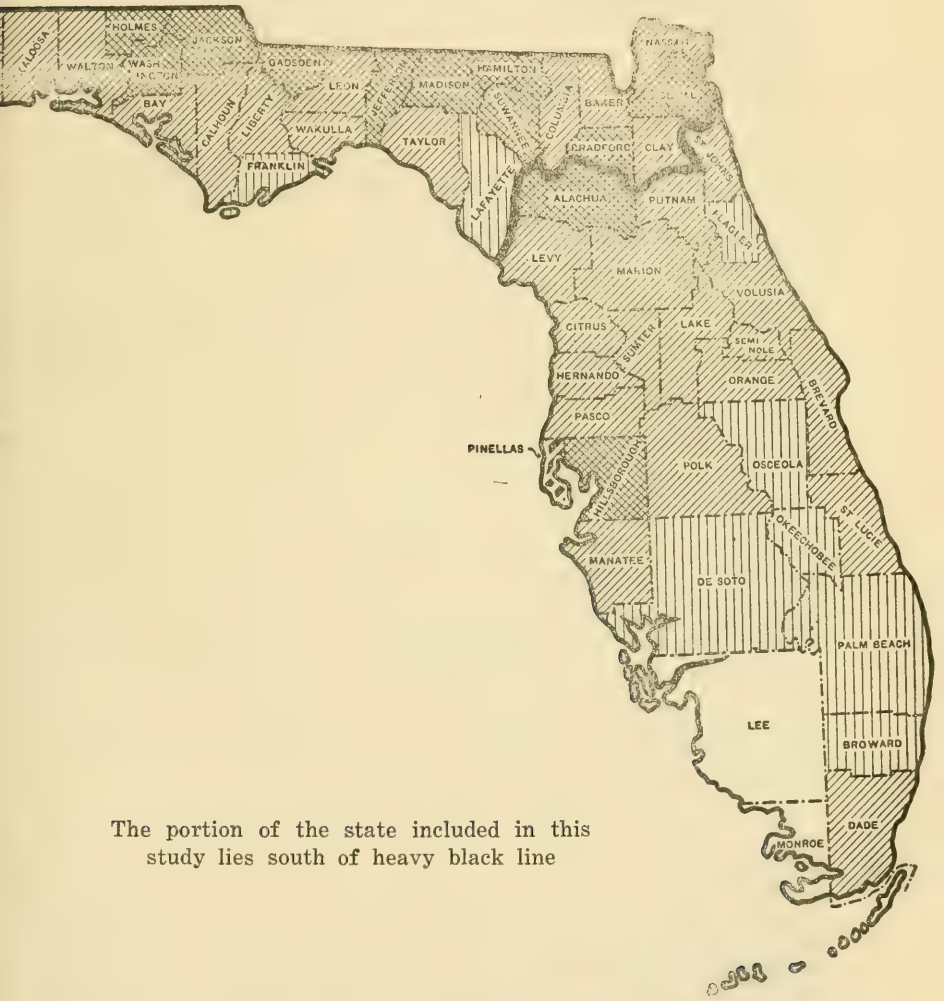
The portion of the state included in this study lies south of heavy black line

The East and West Coast counties present problems peculiar to their locations. The southern section of these counties is Florida's principal tourist section. The central and northern parts are interested in citrus groves as well as being a tourist section. The central line of the peninsula is the most stable and progressive. There is not the unstable periodic

DENSITY OF POPULATION OF FLORIDA, BY COUNTIES, 1920

Rural population is defined as that residing outside of incorporated places having 2,500 inhabitants or more

RURAL POPULATION



The portion of the state included in this study lies south of heavy black line

circulation of money that is so characteristic of the tourist sections. While this section has tourists, yet the people are more interested in developing citrus groves and in trucking. The greater part of Florida's great phosphate business is found in this section. This study has noted the possibilities of each of these sections as a result of the varied interests of

that section. The direct purpose of this study is to find the real condition of the rural children, the causes of these conditions and the remedies that will most effectively relieve these conditions. The rural children in all the peninsular section come second in the school plans. The town schools come first.

CHAPTER II

Educational Development in Florida

A. EDUCATIONAL BEGINNINGS:

1. *Educational Society formed in 1831:*

More than three centuries ago civilization first took root in America, but the first educational interest manifested in Florida was the organization of the Florida Educational Society in 1831. The purpose of this society was to secure information in order to pave the way for the establishment of a school system. The notice of this movement appears in Volume I of the American Annals of Education, published in Boston in 1831, and reads, "An important step has been taken by some friends of education—the organization of a society, arranged upon substantially the same plan as a state lyceum." Later on in the year the Governor of the territory of Florida was authorized by law to appoint three commissioners whose duty was to inquire into the condition of schools and to report the "Best system of education and the best means of carrying the system into full effect." (8:10.*)

2. *Private Fellenberg Schools at Tallahassee and St. Augustine in 1832:*

The Florida Educational Society awakened much general interest throughout the state, and an attempt was made to establish at Tallahassee a "Fellenberg" school patterned after the manual schools of Switzerland. In the American Quarterly Register for May, 1832, appears this record:

"Five individuals have agreed, if it can be done at an expense within their means, to purchase a small tract of land and form a small manual

*The first number refers to the corresponding number in the Bibliography following Chapter V; the last number refers to the page number of the reference.

labor school somewhere in the neighborhood of Tallahassee. A teacher is to be employed to take charge of a limited number of pupils; suitable buildings are to be erected for the accommodation of the teacher and pupils, who are to board together, with as little connection as possible with the inhabitants in the vicinity. The pupils will be required to devote a certain number of hours daily to agricultural and mechanical employments of the simplest kinds. No pupil will be admitted except with the consent of the teacher and each of the proprietors, nor suffered to remain in the school unless he submits to all its regulations. The studies, at the commencement, are to be confined to the usual branches of a good English education, including mechanics, botany, chemistry, etc." (8:12.)

A branch of the Florida Educational Society at St. Augustine reported that there were in 1832 in that city 341 children between the ages of five and fifteen, but only 137 of these were receiving any school instruction. The Society made an attempt to establish a free school similar to the one in Tallahassee. Though greatly encouraged at first, there is no evidence that either this project or the one at Tallahassee was ever carried to a successful termination.

3. *Early legislation:*

By an act of the territorial Legislature of March 2, 1839, three trustees were chosen in each township whose duty it was to look after the sixteenth section of each township which had been appropriated by Congress for educational purposes and to apply the rents from these to the support of the common schools. As there were few residents in many of these townships, there was little opportunity to rent, so this provision had no meaning.

There were several changes made in this legislation. In 1843 it was made the duty of the sheriff to attend "to the education of the poor". This would imply that those who were not poor employed private tutors. In 1845, by the act of the first state Legislature, the county judges of probate were to serve as superintendents of common school in their respective counties. They were to make a report to the Secretary of State, whose duty it was to report to the general assembly of Florida. In 1849 an act was passed to provide for the establishment of common schools for white children. In the same year the Legislature provided that the school fund should consist of the proceeds from the school lands, and five percent of the net receipts from other lands granted by Congress, also the proceeds from all estates, real or personal, escheating to the state, and from all property found on the coast or shores

of the state. The following year the counties were authorized to levy a tax for schools not to exceed four dollars annually for each child of school age. (8:14.)

There had been little interest in public education, but Congress authorized the sale of school lands, and the consolidation of school funds. The proceeds were invested and the interest was apportioned to the different counties according to the number of children of school age. In 1853 the apportionments were placed in the hands of county commissioners, who were authorized to take from the county treasury such sums as they might deem necessary for the support of the schools.

4. *Public School, Tallahassee, 1852:*

As early as 1852 another movement had been set on foot by the Hon. D. S. Walker, afterwards Governor of the state. He conceived the idea of a public school for white children that should be sustained by a tax levied upon the property of the city where he resided (Tallahassee). Through his influence such a school was established and successfully conducted. This is worthy of mention, since it was among the earliest attempts in the South to support school by taxation. In 1858 the Superintendent's report shows that there were 20,855 children of school age in the state, and that there was appropriated from the Public School funds $6,542.60 for their education—31 cents per capita. A few counties had organized a public school system with a term of three months, yet this was more satisfactory and cheaper than the private schools. (8:15.)

B. Establishment of State School System:

1. *Funds for support of school.*

(a) *Government land grants:*

The school law of 1869 was a very helpful measure for progress. It declared that the State should provide for the education of all her children without distinction or preference. The Legislature, as authorized by the Constitution of 1868, established a uniform system of common schools. It provided for a Superintendent of Public Instruction, whose term of office should be four years. A school fund was to be formed from the following sources:

"The proceeds of all lands that have been or may hereafter be granted the State by the United States for educational purposes; ap-

propriations by the State; the proceeds of lands or other property which may accrue to the State by escheat or forfeiture; the proceeds of all property granted to the State when the purpose is not specified; money as exemption from military duty; all fines collected under penal law of the State; such portions of the per capita tax as may be prescribed by law for educational purposes; and 25 per cent of the sale of public lands which are now or may hereafter be owned by the State." (8:16.)

Only the income derived from this fund could be used, and this must be applied to aid in the maintenance of common schools.

(b) *Mill assessment on property:*

The law further provided that there should be an annual school tax of not less than one mill on the dollar on all taxable property in the state, and that each county should be required to add not less than one-half of the amount apportioned to the county from the income of the state school funds. (8:16-17.)

The school law of 1869 was a very helpful measure for progress. It declared that the State should provide for the education of all her children without distinction or preference. In 1874 Samuel B. McLin, who was acting Superintendent of Schools, reported: "Half a decade ago there were no schools outside of a few of the larger towns or cities. We have now nearly six hundred scattered throughout the state." (8:19.) This is the first mention of rural schools in the State, but the State had been supporting schools by taxation since 1852, so it is easy to see that rural people were not at that time getting a square deal.

In 1885 a new constitution was adopted which preserved all the old features of the Constitution of 1868, and added a measure whereby any community could levy a special district tax, and every county must levy a school tax of not less than three mills and not more than five mills. (5:229.)

In 1903 each county was required to assess and collect not less than three mills nor more than seven on the taxable property in the county. (50:6.) In 1917, by a constitutional amendment, ten mills was made the minimum county school tax. (30:1.)

The following is the table of Florida Public schools by decades:

The first record (1832) showed that there were 341 children between the ages of five and fifteen, but only 137 of these received any school instruction.

Year	Number of Schools	Enrollment
1840	51	925
1850	69	3,129
1858	97	2,032
1868	(Estimated) 400	3,000
1878	992	36,961
1888	2,249	82,323
1898	2,538	152,598
1908	2,457	224,677
1918	2,996	319,954

2. *First Course of Study:*

Previous to 1869, rural schools were kept in small cabins, outhouses and sometimes in dwellings, by itinerant teachers who scarcely ever professed to teach anything higher than Webster's Spelling Book and arithmetic as high as compound numbers. In 1868-69 the Federal Government built some twenty buildings at an expense of $52,600, which accommodated 2,500 pupils. (8:18.)

Several of the more prominent towns in the state received money from the Peabody Fund donations for the support of schools during the years between 1870 and 1880. These amounts ranged from two hundred to one thousand four hundred dollars each.

A law enacted in 1872 provided that all elementary schools should be graded and divided into primary, intermediate and grammar departments, and that the branches taught should be confined to spelling, reading, writing, arithmetic, geography and history. Little regard was paid to this law prior to 1877, except by such schools as were aided by the Peabody Fund. The schools aided by the Peabody Fund were uniformly graded and the school year lengthened to ten months. Since 1877, as shown by the table, the schools have made rapid progress.

3. *Certificate Regulations:*

A new era in Florida schools began in 1903. W. N. Sheats became State Superintendent of the public schools of Florida in 1893, and largely through his influence the first real certification law was passed. Previous to this time, the county superintendents held the examinations, most of which were oral. After the passage of the certification law in 1903 the State Superintendent prepared all the questions which were uniform throughout the state, and the examinations were held at the same time in all the counties. (5:231.)

The Legislature of 1917 changed this method by providing for a Board of Examiners, to be composed of three eminently successful and well qualified teachers to be appointed by the State Board of Education upon the nomination by the State Superintendent of Public Instruction. (31:3.)

By Legislative Enactment of 1917 we find Florida for the first time recognizing teachers from other states without examinations. Such teachers must present a diploma from a standard university, college or normal school requiring a four-year course for graduation. (31:7.)

In 1921 the Legislature made another concession to teachers from other states. Teachers who have taught twenty-four months, upon presenting certificates issued in another state whose certification requirements are fully equal to those of Florida shall receive a Florida certificate of like grade, provided they have had from two to four years in a standard college, university or normal school above a four-year high school course. (32:15.)

C. *Training Schools for Teachers:*

1. *Normals:*

In 1887 the Legislature established two normal schools, one for each race. The one for the whites was located at DeFuniak Springs. The one for negroes was at Tallahassee, and afterwards became the recipient of one-half of the Morrill Fund appropriation of Congress, with which assistance it is maintained as the State Normal and Industrial College for Colored students. By the Buckman Act of 1905 the white normal schools of the state became departments of the University of Florida and the State College for Women.

2. *High School teacher training department:*

Florida tried to meet the demand for trained teachers by putting in Teacher-Training Departments in the High Schools, but in some instances these did not prove a success. The teachers put in charge of these training schools were not always trained teachers themselves. As a result the people were not satisfied and the training departments were discontinued. These training schools are a success if trained teachers are put in charge of them and the entrance reuqirements raised. The pupils should be required to do at least two years of High

School work before entering. They are allowed to enter now after finishing the eighth grade.

3. *Teachers' colleges in State schools:*

The opportunity for teachers' training is very meager in Florida. The teachers' departments in the two state schools at the University of Florida and the Florida State College for Women provide the only means for teacher training.

The report of the Board of Control of 1918 shows that there were only 69 students in the Teachers' College and Normal School Department and 539 in Summer School, making a total of 608 who were taking teachers' training in the University of Florida, and for the same year in the Florida State College for Women there were 248 in the Normal Department and 363 in Summer School, making a total of 611 who were taking teachers' training courses. The grand total from both institutions was 1,219. (28:46, 218.)

In 1920 the report shows that in the University of Florida 72 students were taking courses in the Teachers' College and in the Normal School Department, and there were 712 in Summer School that year, making a total of 784 who were taking teachers' training courses. There were in the Florida State College for Women for that year 156 in the Normal Department and 433 in summer school, making a total of 589. Then in the two institutions for that year there was a grand total of 1,122 students taking teachers' training courses. (29:67, 238.)

All of these students, however, were not training to be teachers. The records of the University Summer School of 1920 show that of the 712 taking summer work, 353 have no certificates of any kind. There were 117 seeking first grade, 109 second grade, 26 state certificates, 20 specials and 24 State Primary. It is noticeable that the greater number are seeking first and second grades. The summer school work was not training for teaching, but for getting certificates for 353 of those who were at the University. The writer asked for the same record from the Florida State College for Women but received no reply.

These trained teachers do not often go to the rural districts. The cities can offer more inducements in every way—

then why go to the country? The trained teacher goes to town. The untrained teacher usually goes to the country.

There are three types of teacher in the country schools—the apprentice type, the neighbor girl type and the trained type. The apprentice type stays in the country just long enough to learn the trade, then she is promoted to town and gives the town schools the benefit of her experiments. The neighbor girl type is very detrimental to progress. She is one of the neighbor girls and knows nothing about teaching except what she learned from a former neighbor girl. There is a tacit understanding whereby the neighbor girls are extended the courtesy of teaching the neighborhood school in turn. Rarely ever do teachers of this type go even to summer school. There is absolutely no chance for school progress in this type. The trained type of teacher is the teacher with the rural vision—one who loves Nature and can show its wealth of beauty to others. There are very few of this type.

There is also the "Snowbird" or tourist type that is partly rural. There is some opposition to these, but often teachers of this type are trained and prove real assets to our teaching force. It is noticeable that a great percent of our summer school students are teachers from other states and teachers who have had normal training. Then why cry them down when our own state does not make provisions to train our teachers?

The educational development in Florida has been given in order that we may know when and where public education in the state began, how it was financed and how the standard of teachers has improved. By knowing the foundation and the gradual development of the system and the extent of teacher training in the state, we can have some conception of what to demand and what to expect of the school system of Florida.

CHAPTER III

Rural Situation in the United States

A. Factors Influencing:

1. *Home.*

(a) *Parental sympathy is not lacking:*

In order to know the rural situation in the United States we must measure by the three factors that most closely affect

it—the home, the school and the church. If these three were closely allied for good, we would not have today's rural problems. It is not impossible to have this allied condition, but are we not getting further from it?

The mission of the home is to give back to the community more than it takes out of it—to produce something more valuable than it consumes. Is there any other way to judge the efficiency of the home except by its social product, or any way to judge the value of that product except by its effect on the race? (6:10-11.)

There is so much being said about the changed conditions of the home—that children are not being reared as carefully as they were a generation ago; that children lack obedience and respect to parents. Can it be true that the children have changed and the parents have not? If parents could only know each other! They need to know that "Others have troubles with calves, chickens and children; that others built hopes on crops of hay and harvested bins of grain; that others carried scars of frustrated ambitions, and dreamed of better schooling for their boys and girls than they themselves had". (6:15.)

It is so easy to say, "We have more hard luck; more trouble, less to show for our efforts, than our neighbors have", because we know our trials and do not know theirs. Where is the trouble? Is it with the home, the mother, or is it with the children? The boy or girl who can go away from home for the first time and not be homesick has not had all that the home should stand for. There is something sacred about the homesickness of a boy or girl. There is that which says, "We have left the best at home". Let us look into the homes of the mountain mothers of the Cumberland—the homes of our Southern mountains. The mountain mother has imparted her personality to her children, perhaps, as no other mother has. The mountain mother has the advantage of mothers in more civilized sections, for she is queen of their environment. She instills in them a love for the beautiful. There is very little in the home that could be classed as beautiful, but the whole mountainside is home, and they appreciate God's beauty as no other people can.

One mother—a mother whom we would call a crushed mother were she among our neighbor acquaintances—tells of a mountain trip: "My husband, he's choppin' at the first

clearin' two miles from here, and he's been plumb crazy over the yaller lady slippers up that-a-way. He's been sayin', 'I must take the two least (youngest) kids, what ain't ever seen sech, and go up there and see 'em 'fore they was gone'. So yesterday we went. It sure was some climb over them old logs, but them lady slippers was wuth it." (25:27.)

Are our mothers—the mothers we know—losing the opportunity of companionship, of comradeship, by being too tired to go to things with their children; by not taking time to cultivate in their children the appreciation of what the mother would have them appreciate? The mountain mother slaves in the home as no other mother does—yet she is not too tired "to take the two least kids" and go on a four-mile tramp to show them a bed of flowers. How many mothers do we know who would have kept putting it off, or have sent some one else to impress on her children the thing that is close to her heart—the beauty of Nature about them.

So carefully has the mountain mother trained her boys and girls that "Perhaps there is nowhere in the world a spot where women are respected as they are in the Southern Highlands. A woman might tramp alone from end to end of all this region and never anywhere be in danger of the faintest insult from any white man". The mountain woman lives untouched by all modern life. She has progressed so little in the past two centuries that she is the typical American in many ways. The past had its virtues, and the mountain mother of today is not so much a woman belonging to a different geographical region as she is a woman belonging to a forgotten past. (25:193.)

The next type of parents to consider is the type found in another section of the rural districts. Nothing so completely satisfies the first few years of the rural child's life as the well-ordered home. The city child at three and four years of age may slip off to play in the street or go to the neighborhood store. The nurse has trained him away from home while a helpless infant. The mother did not care for him. But the average rural child does know the mother's caress—the pressure of her hand and the sympathy of her tones. Why does not this mother always reign queen of the home? Is the mother responsible? Are the children at fault? Is the community to blame? Or, is the trend of time merely taking its

course? There is a description of the ideal mother that every mother should have framed in her memory. It reads, "Occasionally, when we were small, when school let out and we dashed into the school yard, we saw our mother with little sister in the go-cart. She was waiting to walk home with us. * * Our mother used her hands; she sewed and brewed and baked, embroidered and painted. Yet we have no recollection of a time, unless when she came to meet us, or was ill, that mother was not at home when we returned from school —at home waiting for us in a clean white apron." (17:1.)

The first part of this story is applicable to a great percent of the rural homes that we know. The children cling to the mother and reverence the father. One almost wishes that they could stay young, the faith is so implicit. So many of the parents of today are forfeiting the greatest trust they will ever have—the absolute confidence of their children. The parents slave instead of progress. They slave that they may be able to give their children a better chance. The parents are too tired to be interested in the children's affairs. They are too tired to give them a party, so the children go to the neighbor's home to the party. When the father needed a new suit or the mother a new dress, they denied themselves that the money might be laid by for John's or Mary's schooling. The trip that the parents needed to keep them young and to keep them apace with the times was postponed indefinitely that the children might have a better chance. The parents are not reading the best magazines. They subscribe for them for the children, but the parents are too tired to enjoy them. The children go to college. They are apace with the times and the magazines interest them. Then it is that the children begin to measure their parents by the men and women they have met elsewhere. The times that the parents have denied themselves in order that the children might have more, are lost sight of. The parents are measured as they are found on the outside, and not by the heart. Of course they are found wanting. If they had only taken time to fortify against the critical period of their children—the period when nothing is quite right. It is hard to say that the parents are responsible and it is not just fair to say that the children are entirely at fault, but it must be said that the parents owe it to their children to keep abreast with the times. They owe it to them-

selves and to each other that they never lose interest in personal appearance, and that they do not depend on the neighborhood for the social standard set their sons and daughters, lest the sons and daughters lay the blame at the parents' feet and the credit to neighbors' environment.

The parents have become more and more narrow until there is only one aim in view, and that whole aim, "To buy more land—to grow more corn—to feed more hogs—to buy more land", has the sons and daughters for the goal. The vision was too narrow—no one except the immediate family was considered in the circle of daily toil. The children's circle was once within the parents' circle, but the plans of the parents put it without their circle when they planned that they might go to college.

The parents have placed their boys and girls in a foreign environment, and the children have become aliens to the home that was so satisfying in youth. There is a great tendency to say that "The parents of today just don't understand their children". Can it be possible that the mother who has watched that baby grow from infancy, through the absolute faith age, watched her enter the terrible "teen" age, planned for her to go to college, slaved to keep her there, does not know and understand the daughter—that the daughter understands and the mother does not? The fact is that the parent knows the child better than the child knows the parent, and that the parent is worthy of consideration even after the child has grown up. (18:498-499.)

There is not a lack of parental sympathy, but there is the feeling of helplessness on the part of the parent. They have put their children in broader environments, but did not follow them.

(b) *Lack of spending money:*

The boy does not like the farm because it takes so long to get a start. When he works for a salary he is paid regularly and while he does not really save anything during the year, yet he has spending money. If he had been educated in the country, if there really had been school advantages there, then he would have grown up with rural habits. He would have planned for ideal rural conditions, and would have had interests at home. However, the country lays the foundation of

his character and the city builds on it. The job for the boy in the country is not made attractive. He is putting himself on a low social scale, for the conditions in the country have not been inviting to the better class of boys. He is not paid well, neither is he treated as an equal of the family socially. The country employer is narrow and does not give enough sympathy to his help.

The city employer finds it to his advantage to make some effort toward the advancement of his men. He does not treat them as his inferiors. There are also more boys working for the other man in the city than in the country. The employee finds a society of his co-workers. He may not save any money working in the city, but he is happier. (13:238.)

(c) *No satisfying community pastimes:*

The community attractions in rural districts are very meager. It is because the young people of those districts turn to the towns for their amusements. There is no reason why the amusements in the country should not far exceed those in town, but the country people will not cultivate them. They give them up if they are criticised by narrow-thinkers, while the city holds on to them and tries to defend herself in using them. (13:260-61.)

The slogan of the rural community, "Human contacts, more human contacts, and still more human contacts", if carried out, will do its big part to keep the rural boy and girl in the rural community, and keep them satisfied. (19:57.)

The rural mother is slaving to hold the traditional standards of the home, while the city mother is surrendering her home responsibilities to institutionalized agencies and is fast losing her social functions in the home. She is spending the evening out, eating out, and keeping only enough hours at home to sleep.

The rural home cannot satisfy its boys and girls socially when they come in contact with their urban friends who depend upon the outside public for their amusement. The rural boys and girls are turning their contributions to the city. Then, if the efficiency of the rural home is to be measured by the social product for rural uplift, it fails, and the effect of this product on the rural community is detrimental.

2. *School.*

(a) *Teachers untrained:*

The United States has a right to justly and anxiously ask the country school teacher: "Are you educating the farmer's boys toward a more valuable and happy life on the farm? Are you uplifting the farm home through the education of the farmer's daughter toward greater usefulness and attractiveness in that farm home? Are you making life for the farm woman any easier and any happier? Are you sowing discontent in the home by contrasting the city comforts and pleasures with the country home's emptiness and loneliness? Are you really filling the mission of the broad teacher—the teacher with a vision? Are you seeing the big things in Nature and are you broad enough to show them to the rural people? Do you know enough to talk to the rural people—really talk sensibly for an evening?" The things worth while that some of the rough-looking farmers know would fill a valuable volume, and that quiet, unpretending mother can give the psychology of things in the home and not know it is psychology. It is only, "That I have noticed".

The school system of the United States is awakening to the neglect of the rural schools. It is realizing that the teacher makes the school. If the teacher is good the school is good, and if the teacher is poor the school is poor. There are very few teachers who have trained themselves for rural teaching. The teacher who is interested in the problems of rural life, who is in sympathy with rural life and who is willing to stay by the job is needed. (21:683.)

The Legislature of the state of Maine in 1919 gave funds to the State Superintendent and directed him to select each year, "One hundred rural teachers who are graduates from normal schools, who possess native ability, who are familiar with the conditions of rural life, who are in sympathy with them, and who are willing to make rural teaching a profession. In order to do this, the work must be properly motivated by compensation, by dignity of service, by opportunity and by the support and cooperation of the rural people." (33:282.)

The plan was to create a rural teaching profession, or rather a differentiated form of general education which will attract teachers of proper personality, character and education.

In the summer of 1919 the first hundred teachers were selected and put into a six weeks' course of study dealing with the rural school and with general rural problems. All the expenses were paid by the state. These teachers are employed in the regular way as teachers, with the additional duty of supervising other teachers. At the end of the year these teachers are given a state bonus of one-fourth of the amount paid them by the town.

The state school provided for these teachers is conducted as an officers' training camp and is called the "Educational Plattsburg". The unit plan of instruction is used and the programs consist of the following topics:

(1) Rural Life Movements; (2) Rural Surveys; (3) Rural Economics and Sociology; (4) The Standardization of Rural Schools; (5) Medical Pedagogy; (6) Rural Life and the Rural School.

The instruction was divided into three forms: (1) General lecture on topic; (2) Discussion groups from the state of Maine viewpoint; (3) Return group for general conference. There were round table discussions in the afternoons.

The benefits resulting from this plan are:

(1) It has cultivated rural education. Other teachers have entered the normals to prepare for rural service.

(2) The qualified teachers showed school officials how poor the rural teachers were.

(3) The results show clearly in the schools of those who took the training.

(4) Rural people now realize that good teachers are available.

(5) These trained teachers are leaders in educational movements.

(6) These hundred teachers are scattered over the state and have definite ideas and ideals of rural school advancement. (33:282-83.)

This is succeeding in Maine and will succeed here, if communities will set a standard. They only need something to rally to.

There are in the United States 650,000 teachers, 365,000 of whom teach in the rural schools. In 1920 151,450 inex-

perienced teachers entered the ranks. The total output of teachers wholly or partially trained by colleges, normals and high schools (Report of the Commissioner of Education, 1919) was but 24,000, so the remainder of 127,450 were inexperienced, untrained teachers and were, in most cases, thrust into the rural schools. The year before there were 122,000 of the same type of teachers who went into the rural schools. (33:298.)

Let us get a mental picture of our teachers. Place them in line, giving each teacher three feet of space. This line will extend unbroken for over three hundred miles. Arrange this line following the order of age—the youngest teacher at one end and the oldest teacher at the other. Starting with the youngest teacher and journeying along the line one will travel one-fourth of the entire distance before reaching a teacher who has passed the age of twenty-one. Then we must admit that one-fourth of our teachers are immature. In all likelihood one will have passed 100,000 teachers before reaching the first of the twenty-year-old group, while tens of thousands of those encountered first are only sixteen, seventeen and eighteen years old.

Form the line again on the basis of educational equipment, as shown by the length of time that these teachers themselves have attended school. One will pass at least 30,000 teachers in this line before reaching the first individual who has had any education whatsoever beyond the eighth grade of the common schools. There are nearly one million of the nation's children, an army half as large as that which was sent to France to save civilization, whose teachers are limited to this slender educational equipment. There would be 150,000 teachers passed before reaching the first individual whose total education amounted to more than two years of high school work. Four-fifths of the entire group would be left behind before one reached the first individual who had met the standard of preparation recognized in all civilized countries as constituting the barest minimum for elementary training—two years of training after high school graduation, or six years of education in all beyond the eighth grade.

Forming the line on the basis of experience in teaching, one would pass 150,000 teachers before reaching the first in-

dividual who had taught more than two years, while the middle of the line would be reached before greeting the first teacher who has taught four years. One-half of the nation's children are being taught by teachers who have not been trained in service.

This record of educational weakness is not surpassed by any other civilized nation. "The poorest democracy might fittingly blush with collective shame at such a showing. Will the richest and the proudest of all the democracies remain smug and complacent?" (34:119, 222.)

There is only one thing to do, and that is to raise the standard for teachers—not a standard of today, but a gradual standard to be met by training.

The Legislature of North Dakota has just made the ruling that after August 31, 1923, all teachers must be at least high school graduates. Each year of college or normal training added to the high school course gives her $100.00 per year increase in salary. Other states are awakening to the rural conditions, and their Legislatures will follow the beaten trail. (School Life, May 1, 1921.)

The rural boy and girl are depending on their State Legislatures for a chance. The Legislatures must say, "Train", before the rural teacher will train. There must be training schools for the rural teacher. The average training school of today was not formed to meet rural needs—it was formed to meet urban needs. Then, if our rural teachers are trained to meet rural needs, rural training schools must be established.

The ideals of the rural schools will be the ideals of the children who attend such a school. The rural children replenish the citizenship of cities and towns, hence it is extremely necessary that they be trained for full citizenship.

The trained teacher will not be enough—she must be a trained leader. The leaders must live in the country and love it.

(b) *Consolidation needed:*

The rural school must offer opportunity for social and intellectual growth, and the larger the unit the better the

opportunity for cultural improvement. It must be great enough to give opportunity for expression and the development of leadership that is possible only through numbers. (11:64-67.)

Consolidation seems to be the only thing that will combine efforts and interests. The one-teacher school will have to be continued in some localities, but when it stays it should be supplied with a very strong teacher. She must be broad enough to train for complete citizenship. How severely the nation suffers because of the neglect of the isolated schools of the open country and the small villages may be somewhat dimly comprehended when we remember that these schools enroll in the aggregate nearly sixty percent of our boys and girls, and that a clear majority of the voters of the next generation will be limited in their educational opportunities to what these schools can provide. It is a fact that out of every six illiterates in our native-born adult population, five live in the rural districts. The only way to solve the problem is through a nation-wide reform of rural education, and this means, first of all, devising ways and means by which the present immature, transient and untrained teaching personnel of the rural schools can be replaced by a stable, relatively permanent and highly trained personnel.

These problems can never be adequately solved until we reserve for the isolated schools our very best teachers, making such appointment a distinctive honor and providing a salary that will counteract the attractiveness of urban service. These difficulties will be reduced with the growth of the consolidated schools, but the growth of the consolidated schools is limited. (2:230-33.)

About 50,000 of our little one-room schools have been replaced by some 12,000 consolidated structures. Three-fourths of these consolidations have occurred in the last ten years, but about two-fifths of our one-room rural schools have come to stay. Every section of the United States has felt the wave of consolidation, but the wave in the Middle West has probably been greater than in any other section. As the schools are consolidated, better houses are built and better salaries are paid the teachers, thus tending to bring contentment to the ranks of the profession.

(c) *Boarding conditions bad—no privacy—no accommodations:*

Consolidation also helps the boarding and social conditions. The solution of the boarding problem to a great extent relieves the social problem. The country home is not altogether to blame. Oftentimes it is the teacher who will make no effort to adapt herself to the home. The inmates of the home would be glad to give of their hospitality, but they are made to feel that it is not desired. This is not always the case. In some instances the teacher is taken for the board money. Her comforts are not considered. The room is often too cold for her to sit in to prepare her school work for the next day. She cannot study when sitting with the family; she is likely to be criticised for having to study to keep up with her classes. She is likely to be discussed if she deals in the 'round-fire gossip, so what can she do? The inexperienced girl usually fails; she does not, as a rule, have the personality to win her way so completely that the home will adjust itself to her. The teacher with such a personality is the only teacher who will count in the upbuilding of the community.

(d) *Lack of community spirit for the school and teacher:*

The social life of the rural teacher is often very narrow. She is not invited to take part in the neighborhood social affairs and she is watched when she goes away lest she enter into social events there. Sometimes the teacher is not invited to the rural festivities because she has made the people feel that she would be bored with them, so the rural teacher has not found herself, neither has the rural patron found himself. Though they live in the same home, they are aliens in word, in deed and in act. This teacher is not likely to go back to this neighborhood the next year. The school cannot progress until there is a satisfied, efficient leader.

When a community has a shifting membership, or when the leaders of the community life are constantly changing, but little can be done toward the development of a high order of community life. (35:37-38.)

There is a lack of community spirit towards the school and towards the teacher. One should not be surprised to find this, since the attitude of so many rural teachers has been a lack of appreciation for the rural life, and the attitude of turning

from the rural life to the urban life. The teacher must believe in rural life before she is safe to guide the rural boy and girl to a greater appreciation of the life about them.

When the teacher is broad enough to place the "upbuilding of the rural life" as her goal for teaching, then there will be no lack of proper community spirit and a proper attitude toward the school and toward the teacher. The school will become the community center. Everything will radiate from the school. Patrons will support it and protect it, and the teacher may be the guiding genius of the community. It will be through the teacher that progress will be directed. The teacher holds the key to the problem. She needs only to tell the things in school and the children are message-bearers to the home. When the teacher has a real rural vision and thinks with the people, they will, in turn, think with her and work for her.

(e) *Health conditions a menace:*

The wide-awake teacher will broaden her influence in the rural home by tactful talks on health lines. Much of the responsibility for the health of the city community rests with the health officer, while in the country the responsibility rests with the family. The family is thought of as the unit in health activities and the mother is commonly the health officer. Disease and ill-health are usually traceable to defects in sanitation. The farmer is an individualist, the city dweller a communist, and it has been well said that "The errors of individualism are best treated by education, and the errors of communism by legislation".

During a period of twelve years, from 1900 to 1912, the urban death rate of the United States fell 21.2 percent while the rural death rate fell only 8.6 percent. It is said that 400,000 people die annually in the rural communities of the United States and 2,000,000 others are seriously ill from infectious diseases, nearly all of which could be prevented by proper precautions. (9:3.)

Children will enter whole-heartedly into health movements. They enjoy the health crusades and it has done much to make the rural child think in terms of health. If the health habits of this crusade had been taught to our young men when they were in school, our Nation would not have a record of "One-

third physically unfit for military service". There are many diseases that belong principally to school children—diseases that are preventable if the children are only taught how to avoid them. The city child is taught to protect himself against disease by making his body strong, and there is an appreciable difference in the numbers of the city and rural children who have these diseases. The Federal Government has been given the power and duty to provide for the common defense. Has it done this when one-third of its people are physicaly unfit, and one-fourth are illiterates? Is there strength in either? Can we form a perfect Union—can there be union of thought and union of strength when one-third have no health and one-fourth cannot read? What could promote the general welfare more than trained intelligence and sound health? What would "insure domestic tranquility" more than common culture? Would it not "establish justice"? Would not health and intelligence give us prestige? Is there anything save this that will "secure the blessings of liberty to ourselves and our posterity?" Is our Government doing its part in giving the rural child liberty from illiteracy and from disease? (24:205-207.)

3. *Church.*

Ministers cling to the towns and go into the rural districts just to deliver sermons, with no rural application:

The rural church presents something of the same problems as the rural school. One is likely to find the conditions of the church and school parallel. If the rural people give a preference to either, it is likely to be in favor of the school.

There are distinct rural types of the church and of its ministers as a result of environment. We have the progressive type; the town-preacher type, and the non-progressive type.

The progressive type is the church located in a good farming section where the preacher's home is in the neighborhood, and the preacher enters into the rural interests. He visits in the home, knows enough about farming and farm life to spend a pleasant evening in the homes of his members. He must know something of soils and fertilizers, and the needs of different plants. He must know the latest machinery for the farm—in fact, he must think with them. A broad-minded

man of this kind gives his members more from personal contact than in the weekly sermons. The average farmer will meet the minister on his plane after the minister has met the farmer on his plane. There must be a common plane before there is personal contact. So many ministers are just men speaking from the pulpit. There is no response from the audience because the minister has not touched the right key—there is nothing in common. The progressive country church is the ideal church. All its interests stay in the neighborhood. The school builds on the church and the church gains strength from the school. The farmers take pride in their school and keep their sons and daughters at home for school. This keeps the social interest there. There is contentment when people plan for their entertainment to be in their own neighborhood. Unfortunately, there are very few of this type of rural churches and ministers.

The town-preacher type is the minister who lives in town and who comes out on Sunday morning to deliver his sermon in his rural church. The minister does not find conditions ideal in the country for his family, and for himself, too, so he lives in town and usually has some reason to give why he must go back to town on Sunday afternoon. His sermons do not appeal to the people, for they are not applicable to their every-day lives. The minister knows nothing of farming, and the farmer is thinking everything in terms of his daily life. This type of minister is wasting his time and filling these people with a low regard for the church and for that for which it stands. The minister is prompt on his day, but the people feel that he should visit them in their homes; that he should be interested in their affairs and since he is not, they are not concerned about the church and its affairs.

The non-progressive type of minister is the minister who is not educated, who does not read, who has no interest in daily happenings, and who is not practical enough to adapt himself to his people. The minister of this type is found only in very backward communities, but if more progressive men were put in these communities there would be some chance for improvement. There are usually some people in these communities who appreciate an educated man. It must be said that he fills a pulpit, but does he fill a mission? This type of man is detrimental to the cause. He drives people from the

church. He causes them to place a low estimate on the church and its affairs.

The rural church, on the whole, has lost its old-time place. The minister is not altogether to blame. The people are turning to the towns; they have automobiles and since they can go into town to church, they go. It gives them a new and broader outlook, but it gives them the restless and discontented attitude that is sweeping the country. They have lost the old-time peace and have not found that which satisfies. To get those old-time standards of contentment they must pay a progressive minister to stay with them, and build up their interests at home. One day in the week away from home tends only to fill people with discontent. They see only the Sunday side of life and the restlessness of the life is not shown. The farmer places the wrong estimate on this view, and measures his discontentment by this Sunday view. The result is not fair, for the conditions are not true.

It is a bad state of affairs when people nurse the desires for what they want and cannot get it, and, in turn, refuse to cultivate what they have. The satisfied, progressive preacher and teacher have a place and opportunity that no other persons have. It is their opportunity to show the rural people that they have the wealth and the beauty of the land at their disposal. They have the thing that satisfies most, and the conditions and environment that are conducive to make great characters. Will the teachers and preachers use their opportunity to fill this great mission in life? "It is one thing to have an organization and another thing to fill it with life. And then it is a very important matter to know what sort of life to fill it with". If the object of the organization is to afford a mechanism by which the whole community can cooperatively use its life, then there is a great deal in it. Without this spirit of cooperation the organization is dead and may be dangerous. (34:267.)

No worth-while young man ever left the farm because the work was hard. He left because of the feeling that life was not easier elsewhere, but better, more worth-while, less narrow, more free and gladsome. He was driven by a craving for something he was not getting, and he felt that life had something that he was losing. (34:247.) He left the farm

because he was not shown the great wealth it offers. Should the teacher or the preacher feel responsible?

B. Means of Improving Conditions.

1. *Enforce attendance:*

We, as a nation, have awakened to the fact that we are behind in education. We had been living up to the old adage, "You can lead a horse to water, but you cannot make him drink". We have spent money for education; yes, wasted it for education, and when the test came—the test of measuring our literacy, we found we were only 75 percent proficient. The attendance law is not a late legislation in all our states, but it is new in some. Every state has made some effort to make education compulsory. It seems that we should not need legislation, but opportunity to have an educated people. But the ignorant and short-sighted we will have with us always and the children of such must be protected.

A statistical report of the Commissioner of Education, which recently appeared, shows that the average person who completed his education in 1918 had attended school only 1,076 days. The average school term in the United States is about 160 days, or eight months. The average child goes to school 6.7 years. These statistics report conditions for the better city school systems, but the rate of progress is assumed to be about the same throughout the United States. (4:1.)

If a child goes to school continuously for the 1,076 days, he would be in school a little less than three years. The United States mortality statistics show that the expectancy of life after the age of five is almost fifty-seven years. The average child, who enters school at five years of age, spends one-nineteenth of his remaining life in school.

There is another waste in our educational machinery—the waste of money. The average yearly length of school term in the United States is 160 days, but the average child attends 120 days, or about three-fourths of the time. Then one-fourth of the total expense is wasted. The time is set, the table is prepared and the teacher invites them to come, but they with one voice cry, "I pray you have me excused", and we as a nation are answering, "You are excused". It is costing the nation annually $194,000,000 to pay for the part of the

feast that these 5,000,000 children have failed for different reasons to be partakers of. (4:2.)

The attendance law is not accomplishing all that was hoped for it, but when the statistics show the increase of attendance for the past fifty years, there is progress noted. In 1870 the nation's children refused to use 41 percent of the nation's output for education, and now there is only 25 percent wasted.

There are two well-defined fields of work for the attendance officer, the one to secure regular attendance on the part of children who have not reached the lower age limit prescribed by attendance laws, the other to see that the children who have attained the upper age limit do not drop out of school or become delinquent. In 1918 there were twice as many pupils in the first grade as actually entered school for the first time. There were about 2,000,000 children repeating the work of the first grade. The children evidently do not attend school regularly in this grade. Parents do not consider the gravity of their irregular attendance. They excuse by saying, "They are little; they will have plenty of time". The attendance law should demand that they attend after they enter school. The reports show that forty-seven states permit six-year-old children to attend school, but not a single state compels them to attend. There are more children in the first grade than there are pupils attending the full high school. (4:2.)

Statistics show that the falling-off of children in attendance becomes noticeable after they have reached their thirteenth birthday. All except four states allow labor-permits to be granted to children who have become fourteen years of age, provided they have met certain educational requirements. Such laws invite withdrawal from school at this age, and only 68 percent of these children remain in school. The public schools must educate "all the children of all the people" and their full duty has not been discharged until they have given the tools of a vocation to every youth of the land. For the schools to meet their full responsibility, the Legislature must say to the children of the state, "You must attend school". The withdrawals among the retarded pupils is almost seven times as great as among pupils who are making satisfactory progress. The schools have failed to offer a type of vocational work fitted to the needs of the retarded children. These chil-

dren have been unable to master the usual academic school work, and seek the first opportunity to escape.

The attendance laws are too lax. They are made to fit too many special cases. The legislature must set its standards for education, and then enforce it. At present only 139 out of each 1,000 who enter the first grade are completing the public school course. The state can ill afford to allow over one-third of those who enter school to withdraw before they have finished the eighth grade. Schools supported by all should see that all are educated. (4:14-15.)

2. *Use standard curriculum but make local and general application:*

In order to plan the type of school that will meet the vital needs of a community, one must hold in view the social, intellectual and economic life of the community. The course of study must be planned to meet this. The course will not have fulfilled its mission if it meets only the community needs, but it must touch the life on the outside. It must be applied so that the entire community is touched. The training must be broad enough to expand with the times. The environment of a baby born in 1850 and living for twenty-five years is decidedly different from the environment of a baby born in 1900 and living twenty-five years. The environment of the latter is much more complicated. It is not only harder to be a baby now than it ever was before, but it is harder to be a grown-up today than heretofore. The successful grown-up has a greater responsibility than ever before. It is more complex. It is harder to teach one to be a successful grown-up, so the teacher's problem is many-fold harder today than it was a century ago. (10:1-3.)

The complexities of modern social and industrial life become a part of one's environment and since education is modified and governed by environment, it has become a complicated process. One's education manifests itself always through self-reliance, self-respect or self-control. These are personal habits or powers, and for one to be educated and to possess means of education, they must be personal.

Any personal problem that a child solves educates him in that line. A child's problems must be real, must be felt and must be personal if he increases his self-respect, self-control

or self-reliance. It is not at all necessary for a teacher to be present to have an educational situation. Oftentimes it is better for the teacher to leave the pupil alone and let him find himself by experimenting. This finding himself may develop self-control, self-reliance and self-respect. (10:4-5.)

If we are to measure—and it is a good and just measurement—by the standards that Dr. Strayer has given, then we, as teachers, should be serious. Dr. Strayer says, "Education is worth just the difference it makes in the activities of the individual who has been educated. Knowledge alone does not lead to right conduct. Many a man is not dangerous today only because he does not know enough to be dangerous. It takes a fine penman to forge checks expertly". (23:153.)

A child must not only be educated to make a living, but he should be educated to enjoy life. G. Stanley Hall says that the best training the world has ever offered has been in the country. Yet there has been a wave of teacher-training away from the country, because they have had no appreciation of the beauties of the country nor the proper kind of feeling toward farm life.

Education is putting an about-face on this wave. It is safe to estimate that there has been more written on country life in the past ten years than had been written in any fifty years before. The proper feeling toward rural life is prompting this Back-to-the-Country movement. The towns did not have that which could satisfy. The great majority of the farmers are doing better than the great majority of bread-winners in the city. The farmers have speculated on the possibility of getting rich quick in the city and a great percent of them have failed. The anticipated fortune did not materialize, and when middle age came on they found themselves in a great industrial machine, unable to return to the country. (35:140.)

Education must concern itself with the ideals, purposes and standards which should be acquired by children. Turn out of our school rooms children with high ideals, with worthy purposes and true standards of conduct and one may safely risk their acquiring useful knowledge and putting it later to good use. The course of study should not be so rigidly set that it will not bend to fit the needs of the pupils. This does not mean that the pupil's course of study shall be made to

conform to his likes and dislikes, for a pupil is often very changeable, but he is to be allowed to show his preferences.

The teacher is to see that he plans a course that is broad enough so that he may change with a minimum of discouragement and loss. If the boy goes from the country to the city, his course should have been so broad that he can meet the requirements of the city school. The rural course must be broad to meet the citizenship of the city and to prepare the pupil to hold the place of leadership in the commercial and industrial world. It has been said that 94 percent of the leading citizens in a large eastern city were brought up on the farm. Of a group of 100 representative men, commercial and professional, in Chicago, 85 percent were rural. Eighty-five percent of the students in four colleges and seminaries come from country districts, while upward of 60 percent of the men and women mentioned in "Who's Who" likewise are from the country. (35:143.)

This drain of leadership from the country has robbed the country of leadership. Those who were once the country's leaders have been drawn to the city, there to exercise their ingenuity in developing a civilization much more progressive than that which was characterized by the open country. (35:44.)

3. *Secure trained teachers with rural vision:*

It does not matter so much whether the pupil is studying history or civics, if the teacher is trained. She can develop the right type of citizenship in either class. If the pupil is historically inclined, he will present the subject from a historical standpoint, and she will correlate it with her work; and, on the other hand, the pupil who is interested in the governmental workings of the country will present it from his point of view and the trained teacher will apply his ideas. This develops independent thinking and the lesson is made much more valuable. The trained teacher inspires her pupils to think, and leads them to make applications to the life about them. When life to the rural child is in terms of things about him, when the things discussed mean his home, his life, his neighborhood and his school, then the rural school has found itself and the trained teacher is fulfilling her mission.

4. *Give furnished homes to teachers:*

The first teacherage built in the United States was built in 1894 in Hall County, Nebraska. It was the first home erected by a school district and cost one thousand dollars in gold. Mrs. Josephine Preston, Assistant Superintendent of Schools of Walla Walla County, established the first teacherage in the state of Washington. Mrs. Preston got the idea from a rural teacher in a country district. This teacher could not find a boarding place, so she went to Mrs. Preston and asked that a portable cook house nearby be moved into the school-house yard for her to use. This was done. The house was twenty-five feet long and covered with canvas. She furnished and roofed it for the winter. Her brother, twelve years of age, came to live with her. This teacher was a leader. The patrons were ashamed of her shack and before school opened the next September the teacher and her mother moved into the new teacherage. This teacher remained here for three years and then went away to college to finish her education, but she had started something that has spread until now there are more than one hundred teacherages in the state of Washington. The state of Georgia has the record of one teacher who has a portable house. She pitches it in the yard of some patron and moves her house when she moves herself. (20:145.)

The teacherage is to solve more than one problem. The first question that is usually asked is, "How much can one save living in the teacherage?" From one who has lived in a teacherage the answer would be from many angles. The dollars and cents angle is disposed of first, for so many are living on the dollars and cents basis. Yes, it is much cheaper. If the teachers do their own work, it costs less than half what board would cost, but that is the smallest measurement of all. It is a home apart from the community. It is a home where the family has a common interest, and this interest develops personal sympathy. It is a place for teachers to really relax, really be true to Nature, really be free and feel safe in doing it. The teacher who boards in the patron's home must conform her life to the life in that home. It may be that the life in that home is entirely foreign to her. Their code of morals may be different, the type of food not at all to her liking, their appreciations of comforts may not balance on the scale. If there

is nothing in common between the teacher and the home, how can there be a unity of purpose? The teacher spoils the home, and the home in turn lessens the teacher's ability to do her best.

Many a teacher who fails in school would be a success if she had the quiet home to go to at night—the home that is hers to be free in, and from which to demand sympathy. The teachers are one family, working on the same troubles and giving a family sympathy.

Several of our leading foreign countries have had teacherages for years. The tramp teacher is unknown to them; the teacher who has spent a lifetime in one school is rather the rule than the exception. When the patrons of the schools in the United States feel that they want the teachers among them; when they let the teachers feel that they would like to have them as citizens of their neighborhood; when the patrons are really concerned about the comforts of their teachers, then the teacher becomes a part of them. She ceases to hunt a new place every year. She is no longer a tramp, but she appreciates the interest. She is glad to adopt their neighborhood for hers.

5. *Keep teachers from year to year as community cooperators:*

It has been said that a teacher must stay in a place for ten years before she can establish definite standards for the neighborhood. That helps to explain why the rural schools are not being built up. The itinerant teacher is the rolling stone that gathers no good. She does not stay long enough to really become interested in the affairs of the neighborhood. She did not come to stay, so she does not live for the time now, but for what she will do when she leaves. If the same teacher stays from year to year she invites progress. She is living for herself when she lives for her neighborhood. She plans things that will build up the neighborhood with the school. She encourages parent-teachers' associations, or any club that will bring the mothers into closer relation with the school. So often mothers are critical of the school that their children attend because they just do not understand. They feel that the teacher is an alien and cares only for her salary. After they know the teacher in the club, they realize that she

is interested in the same things that they are, and that she is dreaming the same dreams of the future that they dream. There are so many improvements that could be placed in every school, if there were clubs to work for them. The teacher must be a part of these clubs. Since the rural teacher has been one of the factors that has held the neighborhood down, she should be the factor to pull it up. She can best do this by inviting the help of the patrons through clubs. These clubs should be broad enough to affiliate with county clubs and thus make them feel that their school is a part of the school system of the county and of the state.

6. *Cooperate with County Agents and Home Demonstration Agents:*

The teacher should appeal to the patrons to encourage their children to become co-workers with the County Agent and the Home Demonstration Agent. These two organizations mean much more to the rural boy and girl than any other organization. In these clubs the boys and girls have their own stock, and have the money from it. They have their tomato crops and start bank accounts from the proceeds. The boys have their corn clubs and pig clubs. They, too, have bank accounts that they have started from the club proceeds. These clubs require accurate accounts of all expenditures and incomes to be kept, thus training the child in business principles. These clubs invite competition. To win out, the club members follow closely the directions given to make their work proficient. The boys have found, by actual experiment, the best way to grow corn, and the girls know how to grow tomatoes. The whole family becomes interested in pigs and chickens, and other stock is tried. The farm becomes an experimental station. Every section of the United States has felt the effects of these organizations.

This great agricultural construction work of the United States is divided into two parts—the fifteen Southern states, and the states of the North and West. There are about the same number of county agents in these sections, but there are about twice as many home demonstration agents in the South as in the North and West. The report of the Southern states is given because it deals directly with and includes the section treated in this discussion.

This work of the county agent in the South started on a small scale in 1909 and the results quoted show the progress of one decade. These results are very encouraging to one who is filled with a desire to see the Back-to-the-Country become a nation-wide movement, and "A better-developed farm" the nation's slogan.

The following is the increase of the farm productions of the South in this period:

Corn	17.9%
Wheat	150.0%
Oats	98.7%
Hay	113.0%
Irish Potatoes	64.5%
Sweet Potatoes	64.6%
Rice	100.0%
Peanuts	100.0%

Velvet beans increased from a small acreage in 1910 to more than 4,000,000 acres in 1918. Dairy cows have increased 10% since 1910.

Under the direction of the Home Demonstration Agent, $15,000,000 worth of fruit and vegetables were put up during 1918 and $1,800,000 worth of fruits were dried. The grand total production of the boys' clubs in the Southern states was over $12,000,000. (12:8-9.)

The rural people are finding out that there are great problems to solve in the country—problems that will insure great wealth of interest, of contentment, of education and of dollars. The County Agents and the Home Demonstration Agents, together with the efficient, trained, satisfied teacher, hold the key to the situation. May they unlock the situation and show the farmer these great opportunities on the inside!

CONCLUSION

The reader might ask, "Why has so much of the educational development of the United States been given"? The answer is logical. Florida is the most cosmopolitan state in the Union. One is likely to find a dozen or more states and countries represented in one rural community. Perhaps the teacher, also, will be from another state. The Biennial Report of the State Superintendent of Public Instruction of 1920 shows that there are a little more than one-fourth of the teachers from other states. There are really more than this,

for numbers of homesteaders from other states are teachers and claim Florida as their state. (3:16.)

The school is then a result of its environment.

The progress of the State in all lines has been greatly aided by people coming in from other states. The Florida people welcome the outsiders when they come to buy land and build homes, but there is a feeling of resentment against the "Snowbird" teacher.

The advancement of the state has been largely determined by the people coming in from other states. She stands sixth from the bottom in the illiteracy list and fortieth in educational standards, but she is progressing. Her progress has been greatest in the last two decades. She measures her progress by comparison with other states, then, to know Florida's progress, we must know the progress of other states in that particular thing.

Florida's big problem is stated in the National problem, as discussed in this chapter, and it is applied to Florida in the following chapter.

CHAPTER IV

Florida Rural Schools

A. What Florida Schools Have.

1. *Waste:*

Since one arrives at all definite opinions by stating the broad field, selecting different phases of the proposition or problem in that field, contrasting or comparing these phases, thereby arriving at the point that establishes the fact or gives base to the proposition; so, in like manner, to have a definite ideal of the rural schools of Florida, other schools of the state must be studied and the conditions that affect the rural schools must be measured by them.

The growth of widespread interest in public education in Florida in the last twenty years has been remarkable as has also the increase in expenditures for the support of the public schools. Within these two decades the public high schools have been established. The elementary schools in city and country have been greatly improved. There have been a

large number of modern school buildings erected, both in the city and rural districts.

From 1899 to 1919, in which time the population of the state increased 82.6 percent, the expenditures for public schools increased sevenfold and the expenditures for higher education in colleges and universities of all kinds, including normal schools, increased more than eightfold. The expenditure per capita of the total population for public schools, elementary and secondary, increased about 300 percent. (11:1.)

The average salary of teachers as reported to the United States Bureau of Education for 1918 is, for the city schools of the state, $649.00; for country schools, $361.00. At the rate of expenditure for public schools in 1918 the State was paying on an average for the public elementary and high school education of its children only $262.00 per pupil through all the years of school life. In 1918 only 51 percent of the total expenditures for public schools was for teachers' salaries.

The sum total of all school expenditures for fifty years is $61,491,020. It is quite probable that an addition of $8,500,000, making a grand total of $70,000,000 will cover all deficiencies in reports, all expenditures for public schools and higher education before 1870, and all expenditures for education through private schools below the college. (11:2:)

It will be interesting, particularly to those who think education has become too costly and the support of the public schools a great burden, to compare costs of schools with some other expenditures, public and private. For the year 1919, the people of the State of Florida paid into the Treasury of the United States on income profits and miscellaneous taxes $15,623,811.89. Their proportionate part of the customs tax for the year was $1,907,000, making a grand total of $17,530,800 paid in Federal taxes. This is three and one-half times the expenditures for public schools in that year, and seven and one-half times the amount spent for teachers' salaries in these schools. (11:4.)

The Secretary of the Treasury has told us that the people of the United States spent in 1919 for luxuries $227,000,000,000. Some of the items in this luxury bill were as follows:

Chewing Gum	$50,000,000
Soft Drinks	350,000,000
Toilet Soap	400,000,000
Face Powder, Perfumes and Cosmetics	750,000,000
Cigars and Cigarettes	1,310,000,000
Tobacco in all its Forms	800,000,000
Food Luxuries	5,000,000,000
Ice Cream	250,000,000

The population of Florida is .009 of the population of the United States. If the people paid their full share of the luxury bill and of the items mentioned, then their total luxury was $204,300,000.

A careful study of these figures will help to dispel the illusion that the cost of education is the chief burden of the people of Florida, and will show that, in comparison with expenditures, public and private, the cost of schools in Florida is almost negligible. Though the sum is small, yet there are great wastes in applying it. We waste the mite by not having capable men to direct the use of it, and in having teachers who are "killing time".

2. *Superintendents with urban vision or no vision:*

When corporations select a superintendent to direct their business they select a man who is proficient in that particular line—a man who is able to direct the business on a paying basis and who will best uphold the honor of the company. When the would-be superintendent applies to the corporation for the position, the corporation inquires into his qualifications from every angle. He must possess character, he must possess ability, he must possess expert training, and he must possess personality. The superintendent deals with the men principally from the standpoint of a money-paying basis, but he is trained, and he must be broad-minded enough to recognize the personality of the men and be charitable enough to see the proposition from the employee's point of view. If corporations are so particular as to the men who manage their business, should not we, as a state, be particular about the men who hold in their hands the direction of our greatest trust —the education of our boys and girls?

There are twenty-eight counties in the section considered. One superintendent in this section has no certificate and his teachers say he could not make a second grade. One of his teachers said that he objected to her failing to promote some

of her pupils on the ground that there would be hard feelings. She also volunteered the comment that she did not know what to do.

That superintendent, from a moral standpoint, is dangerous. Another teacher said of this same superintendent, "He will promise you anything in the way of equipment, but getting it is entirely different. The comment was ventured, "Perhaps he can't get it". To this she replied, "Oh, yes, it is there in the office but he never gives you another thought till you ask him for it again". The question was asked of one of his teachers, "If he is no good and the people know he is no good, how does he hold the job term after term?" To this query she replied with one word, "Politics". It is deplorable that the man who robs your stable of your horse serves his time in the penitentiary if he is captured, but the man who robs your child of his opportunity by not serving him, and who dictates immoral standards to his teachers is protected because we have no law against such procedure.

There is one man in this section who holds a second grade teachers' certificate only, over one-third of them hold first grades, and only three have Life State Certificates. There are two who have had training in a business college, and three who have normal diplomas.

There are only two superintendents in Peninsular Florida who have A. M. degrees. The remaining four hold A. B. and B. S. degrees. Information as to qualifications of county superintendents is very difficult to obtain; even the State Superintendent is not able to get this information in all cases.

The records of the General Extension Division of the State of Florida show that not one of these twenty-eight men are taking correspondence courses. Then there is one other avenue through which they may improve themselves professionally—that of reading. Some of these superintendents have professional libraries and take professional magazines, but are they educated enough to use them? Can they adapt an educational plan to Florida and work it out successfully because it worked out in some far-removed state? If it were not tragic, it would be laughable to hear what some of these superintendents plan to do. They have read of a scheme that some man worked out. It looks fine on paper, but they cannot take

the problem and apply it to the conditions in their own counties. Then what do they get from their magazines and from their professional libraries? Can they even get pleasure from reading them?

Politics is playing the leading role in this office. The pulse of the average superintendent may be taken by laying the fingers on the wrists of the leading men in the county. They will not dare to say anything is detrimental to the school system if that thing is popular.

From the educational standpoint, one of the greatest problems of the coast sections is the tourist problem. The towns of these sections use the free schools as one of their drawing advertisements. The tourists are not charged tuition. They enter after the schools open and usually leave before the schools close. The County Boards do not usually employ teachers to meet this overflow. The rooms are crowded. It becomes absolutely necessary for new teachers to be employed to help during the rush. The by-stander who has a sense of humor is reminded of the Christmas rush, or of some cheap sale. The teachers who are prepared to teach, and who have planned to teach, are already teaching. But teachers must be had and then it is that the County Board sets about to cull the lists of possible teachers and in this way the children are given teachers. Teachers? No. Substitutes, and they are not likely to be so good as the genuine article. The grade is formed at the opening of school, reformed to accommodate the tourist overflow, and formed again when the tourists leave and the substitute teacher is dismissed. Does the child have a chance? The schools are not prepared to take care of the tourist children. The rooms are crowded and every available room in town is used. In some towns shacks were built on the campus to accommodate the grades. There was not enough play-ground space at first, and these shacks are spoiling the play-ground that they did have.

The school population has grown so rapidly that the increased funds do not nearly meet the demands. The counties are badly in debt. Buildings were started and there were no funds with which to finish and equip them. If the state is not able to build and equip its buildings in a modern way and then employ enough good teachers to give their children the best training, they should not try to educate the children of the

tourists. The tourists do not expect it. A principal of one of the largest high schools in the peninsula said that about nine out of every ten tourists expect to pay tuition. They do not hope to have their children educated for them. Then why do it? One superintendent gave this evasive reply when asked if the tourists made a problem: "There are very few people in this town who are not in some class of tourists; very few were here when the town first began". He meant to say that one was about as much a tourist as another, but the teachers in this county say that there is a tourist problem, and that it is ruining the schools.

Another superintendent followed the writer to the door to be sure that she understood definitely the stand that he was taking on the tourist question. The superintendents know that the children are being cheated out of their rights, but their position is at stake. They dare not say what they think.

The equipment in the rural schools is not nearly as good as in the urban schools. Only five counties in the peninsula have libraries in all of their rural schools, but in all these counties the superintendents report them very small. There are several counties that have no libraries in the rural schools except the $10.00 libraries required for standardization.

Only three counties in the peninsula have sanitary water toilets in all of their rural schools; several have the cans and keep them treated with chemicals, but others still have the old-time privies. Yet there is a regulation toilet planned by the State Board of Health. There were only two or three superintendents who reported play-ground equipments in the rural schools. The superintendents, as a whole, did not seem interested. One, when asked what equipment he had in his rural schools, replied, "None". When asked what the children played, he replied, "Just things that they can ring up and play". He ventured to remark further that rural children got about all the exercise they needed walking to and from school and doing the work they had to do at home. He had no vision of the joy that was due those children. A child is supposed to have some time to play and something to play with.

The rural schools are not well supervised. The superintendents do not have time to go out to visit them as they

should. The office work is too heavy and they are tied down doing clerical work. There are some superintendents in the peninsula who are capable of being excellent school supervisors; but those who are not school men in any sense of the word could hardly be school supervisors, and the schools would not be benefited by their supervision.

Two superintendents are making the rural supervising teacher the attendance officer. This plan has its good points and may lead to something better. This officer should be selected because of her ability to supervise teaching, and the attendance officer's work should be second to it. Every wide-awake superintendent is recognizing the fact that the rural schools must be supervised.

The rural people are not satisfied with their schools. They are realizing that they are not being served. They want something of the same opportunities that the town people have. The easiest and most popular thing to do is to give them consolidation. It tends to increase the popularity of the Superintendent, but is it best for the rural people? There is too much of the giving-up of the country to the town—too much of the interests of the rural neighborhood transferred to the town. One superintendent, whose county is in one of the best farming sections of the state, told of his consolidation. He told of bringing the pupils from the country into this large town. He was asked if the children were satisfied to go back to the country, and he replied, "No, they are not satisfied in the country any more". He realized that he had made a mistake, but the people were not willing to go back to the country school. He knew that it was not the best thing to do when he was doing it, but he thought it was the best he could do at the time, so he gave the baby the candle to keep down the crying.

3. *Untrained itinerant teachers:*

It is neither correct nor logical to say that the superintendents are entirely responsible for the conditions of the rural schools of Florida. One needs only to glance over the graphs given to see another great factor. The superintendent cannot make a good school; he may be a leader to plan with and to direct the teachers, but he is only one factor. There must be real teachers to take the plans. A plan that is never

executed has no force. How can a teacher who is not trained carry out a plan that has a definite aim? The teacher must know the plan. The plan must not be entirely the superintendent's, but it must be like our state constitution—it must fit our immediate state and our immediate needs, and still conform to the greater plans of the county superintendent and also the plans of the State Superintendent.

The Biennial Report of the State Superintendent of Public Instruction of the State of Florida for 1921 shows 31,957 children in the chart grade. The first grade shows 36,421 children enrolled. There is only one explanation for this increase of the first grade over the chart, and that is that Florida is doing her part towards keeping up the National weakness of repeaters in the first grade. (4:13.) Five thousand four hundred and sixty-four children are repeating the first grade. The statistics show further that the State paid $31.10 per capita per pupil in 1920. (4:13.) The State in that one grade wasted $169,930.40.

What are some of the logical reasons? Why these repeaters? One might advance first the fact that the children are too young to do a grade in a year. Then they should not be started to school so young. The age limit should be raised. It is a shame to waste $170,000 on one grade when there is such a cry for more money. If we could only use the waste! Someone else says that the lack of trained teachers is the cause. Can that be denied? We think of children being in the primary grade up through the third grade. Then we have 125,737 children who would be classed as primary, (3:13), and there are only one hundred and thirty-two teachers in the state who have primary certificates. (3:14.) There were only thirty-four primary certificates issued in the state in 1920. In the same year eight hundred and sixty-seven teachers accepted a third grade certificate to go out and experiment with Florida's children, draw their pay, and thus do their part toward keeping Florida's standard permanent. (3:14.) It is doubtful if these teachers know that Florida stands fortieth on the National educational list.

More than one-third of the teachers who took the examination for certificates in 1920 failed to make any certificate at all. (3:15.) There seems to be only two reasons for so many failures. First, the standards of the examination com-

mittee are gradually being raised. The second reason is the construction that is being placed on teaching. Too many feel that it is a little profession. The standards of examinations are not being raised.

About 80 percent of the rural schools are one-teacher schools where instruction in eight grades may be required. A trained teacher could do very little in such a school and one wholly untrained could do little more than stay for company. (3:170.)

The untrained teacher is usually the itinerant teacher. She has no real plan for her work. She has no goal. There is nothing that calls her back year after year. She has nothing to finish.

"Why poor rural schools?" finds another answer. One could not expect much from a class of teachers when 97.7 percent go to a new place each year. (3:170.) The average rural child has a new teacher almost every year and often a change during the year. Nothing can be definitely accomplished in one year. The plan may be started, but it cannot be worked out in one year. It is discouraging to children never to finish anything. They can have no definite aim where there is no definite plan.

Is a teacher capable of making a definite plan when she is capable of making only a third-grade certificate? In 1920, 869 teachers accepted third-grade certificates to teach in the Florida schools, and only 796 accepted State, first and second grade certificates combined. There were 276 who took special and 34 who took primary, but these do not very noticeably affect the rural schools since most of the specials are for high school subjects and very few high schools are found in the rural districts. (3:15.) The teachers holding the primary certificates are usually directors of primary departments in the urban schools.

The rural teacher who has a plan guided by a great vision is discouraged when she talks to the itinerant teacher who tells her in bold terms why she does not stay longer in a place. The teacher who has a moral standard for her work is shocked and pained to think that a teacher could abuse her opportunity so thoughtlessly.

It is safe to say that 95 percent of all the teachers who attend the State summer schools are not sure whether they

are going back to the same place or not when school opens. A greater percent of these are rural teachers. They are holding off to see if they can pick up something better. It is disgusting to see the crowds who meet the visiting County Superintendents during the summer session at the State summer school to look over their salary list. This is a common expression heard on the campus during summer school, "I thought you were going to teach at So-and-So".—"I did tell them I would, but I do not know whether I want to or not. It pays only $75.00, and the schools in —— County pay $85.00 and, too, I have been there a year and I would rather change. One can have a better time in a new place. They don't know so much about one. If I teach in this county I know I shall have a good time, for Bill lives in this county. It is only twenty miles to where he lives and he has a car and I know he will show me a good time".

She finally decides to go to Bill's county. She has the time she planned to have. She had her social plans well laid and they worked, but she never made her plans for those youngsters who look up in her face from day to day, demanding to be shown the vision of the greater things in life. She gives them no vision, for she is not thinking for them, neither is she thinking with them or about them. The untrained, itinerant teacher is a menace to the school system. She is of the class who stays on the job, but who does not really teach school. The teachers who attend the State summer schools are the state's best teachers.

4. *Suitcase teachers:*

The suitcase teacher is another type of Florida's low standard teachers. There is not another state in the Union where conditions are more conducive to this type of teacher. This is true especially of Peninsular Florida. The climate invites the tourists. The towns plan to take care of the tourists and give them entertainment. The tourist sections have the best of good roads. These good roads encourage a good bus service. Nearly every town in this section is connected by bus lines. These bus lines are operated on a service basis, but it is a paying basis. They have planned to catch the traffic. The bus lines between the large tourist towns have a bus leaving from each end of the line every hour between seven o'clock

in the morning and eight o'clock in the evening. The suitcase teacher has every encouragement to leave her school behind on Friday afternoon and live independently for herself until Monday morning. She looks on her moral code and feels satisfied that she is staying with her school for the time that she is paid to stay. When she argues that, "This is all the time that I am paid to give to the school", then the serious teacher wants to ask, "Are you using all the time for the school that you are paid to use?"

It is impossible to have two great interests and not have one second to the other. She will cling to the one and despise the other, for she cannot serve school and society.

Teachers are living or boarding in one town and going in on the bus to school in another. They put up the plea that they cannot live on what those people eat, but one has a right to form an opinion of just why they live in town, when they are forever talking about what they are going to do tonight and never say what they are doing today at school.

The writer, while on her survey, met one of these bus teachers. This teacher lived in a town eight miles from the place where she taught. The bus put her at her school town at eight-thirty in the morning and picked her up at five o'clock in the afternoon. The teacher took it for granted that the writer was a tourist, and began to talk as soon as she got on the bus. The writer, seeing her lunch box, asked if she were not a teacher. She replied, "Yes, I am teaching. I did not have anything to do, so I decided that I would teach to kill time, but I don't like it". She said she had been a teacher in the North before she married, so she decided that she would teach when she came to Florida. She criticised everything connected with the school, from the Superintendent down. She was asked if they had beautiful school grounds. To this she replied, "Well, I should say not. I don't suppose the patrons have ever thought of the school grounds since school opened. They have not even raked them". She was given an opportunity to criticise all she wanted to, then the writer told her of the beautiful campus of the Model Rural School of the State. She was told of the rose garden, of the fern beds, of the poinsettias, of the pot plants and of the great space on the campus that had to be raked, and she

was also told that the teachers and children and not the patrons kept the campus.

Is it possible that this teacher "killed her time" only—that the ambition of her pupils was not killed also? Could those pupils have pride in their grounds when she took the stand that she did? Could she be an inspiration to those children when she abhorred everything connected with the village?

5. *Poor boarding conditions for teachers:*

It is true that the average home was not planned to take care of the teacher. She was not included in the plans when the house was built; but is it not ungrateful when the teacher makes her list of criticisms and looks them over each morning lest she forget some of them?

The writer has been a rural teacher for ten years in Florida. She not only boarded in a home of the community, but she visited in other homes in the community and in other communities. While in every instance, perhaps, there were things that might have been added to increase the comfort of the room, yet the comforts might have been made much less by taking out some things in the room.

The women of rural Florida are good housekeepers. They do not depend on colored help, but do the work themselves in a systematic way. Their homes are nearly always clean. Many of the houses are old and the lighting is poor, but they are clean and they have the old-time comforts. The children are taught to work, and to keep neat and clean in the home.

The greatest deficiency in the home is a lack of proper heat. The average home has only one fireplace or heater. The homes were planned for the family only, but the teacher is given a welcome around the fireside. While this is their best, yet every teacher desires and needs privacy. She must plan her work for the next day. She must have time to think over the day alone. Sometimes it is unwise to sit in the family group around the fire, especially if the family deals in neighborhood gossip to a very great extent. The cold weather that is not expected to come to Florida always comes. It is rarely ever cold enough for ice, but it is too cold to be safe or comfortable sitting away from the fire. It is quite probable, if there had been an extra room planned for the teacher

when the house was built, that heating would have been planned for that room. The average rural home wants to give their very best to the teacher.

6. *Narrow, isolated patrons:*

There is so much said about the narrow-minded patrons. They are always trying to advise the teachers instead of advising with the teachers. Is it always possible to advise with teachers? The trained teacher wants to talk over the school problems with her patrons. She wants to do the best, and she realizes that the patron, as none other, can help her by cooperation. Of course, there are exceptions to the rule. Sometimes patrons are unreasonably narrow and self-satisfied. The teacher who moves a case like this is the teacher who adapts herself to the patron's views, instead of waiting for the patron to adapt himself to her views. Patrons question the method used in teaching. They have not used that method, and do not know the merits of it, but if the teacher would have patience, the average patron is willing to be shown. A greater part of the failures is because the patrons are made to feel that the teachers are of a different life from them; neither has met the other half-way.

7. *Underfed and diseased children:*

There have not been enough facts collected on the health conditions in Florida to give an authentic report.

Alachua County is the only county in the peninsula that has a Public Health Nurse. There are other counties that have the nurses for certain sections, but the Alachua County nurse works the whole county. Mr. R. H. Hixson, Secretary of the Florida Public Health Association, says that the report for Alachua County is typical of the peninsula.

Miss Katherine Murphy, nurse for Alachua County, gives the following statement for work begun last September:

Total Number Inspected	2,084
Total Number with Defective Teeth	938
Total Number with Enlarged Tonsils	852
Total Number Hookworm Suspects	841
Total Number Cases Malnutrition	669
Total Number with Disease of Eyes and Defective Vision	668
Total Number with Nasal Obstruction	318
Total Number Defects Corrected or under Treatment	344

Brevard County has a most proficient nurse, Miss Annette S. Malin, under the Child Welfare Organization. Miss

Malin reports that the work has kept down epidemics. Seventy-five percent of the children had sore eyes, and sixteen and two-thirds percent had hookworm. She has had three hookworm clinics and fourteen baby examinations.

The whole county is organized into Welfare Leagues. These Leagues have bought six standard scales for school use. During the summer Miss Malin goes into the homes and takes up cases from her records. At the baby shows the mothers are told how to care for the baby.

Miss Malin says the organization is gaining favor with the public. Now it is the exception to find a child with sore eyes. A child at school will not sit by another child who has "Florida sores". Now all the children have tooth brushes, and take pride in showing that their teeth are clean and in good shape. Miss Malin hopes to put in posture cards next year to encourage proper standing and sitting.

The time has come when the whole child goes to school. The time is coming when would-be teachers will have to be qualified to look after the hygienic needs of the child, and help him in his physical development just as much as they are now required to know how to teach arithmetic and grammar.

All time spent on physical exercise, on the heating, lighting, seating and posture of children is time spent on school work, and is so considered by real school officials. Teachers must get the health vision before they can impart it.

Dr. William J. Buck, ex-member of the State Board of Health, gives a report from the southern part of the peninsula. He states that hookworm is found in 60 to 80 percent of both children and adults, the percentage varying with the locality. Rural districts carry the heaviest infection. Trachoma is found in about 20 percent of school children, and is often mistaken for sore eyes. Accurate statistics are not available for malaria, but Dr. Buck gives the statistics of a phosphate mining town. There had been a strike on in this town, and the town was filled with people whose living conditions were very unsanitary. Dr. Buck did not have full statistics for 1919, but there were 160 cases reported from 1200 people. The statistics are complete for 1920, and show that in this town of 2,500 people, protected by mosquito control, quinine prophylaxis and screening, there were only

twelve cases of malaria. Six of those were brought from other districts, three were chronic and three acquired in the community.

These facts show what can be done for health improvement if proper precautions are observed. While these are not the combined statistics for the peninsula, they include three distinct sections. Alachua County represents the northern part, Brevard the East Coast section, and the mining section the southern part. These sections are typical of the adjoining sections.

Florida could do more if she would only come out and work boldly, but, as in everything else, the tourist problem overshadows the efforts. The reports are not given to the public for fear of hurting the tourist trade. The tourist advocators objected to official health work being done under the name of the Tuberculosis Association, so the name of the organization was changed to Public Health Association. There could be so much more done if the Public Board of Health could work boldly and advertise more. It is nothing but right that the ignorant should be shown the conditions.

B. What They Need.

1. *Enforced attendance:*

Since the purpose of the school is to educate the children, then the first need is to put the children into school. There is only one way to put all of them in, and that is by enforced legislation. This State has had legislation for compulsory attendance for two years, but its purpose is defeated by provisional clauses. These provisional clauses serve as gaps for the very people for whom it was made. The increase in enrollment and attendance in the September following the passage of the law was beyond expectation. The people thought they had to put their children into school. Some of the primary rooms were fitted with tables and chairs to accommodate boys and girls of fourteen and fifteen years of age. They went because legislation said "Go". In most cases there was no excuse to offer. The parents were not interested and they had made no effort to put the children in school before. Such parents are not always people who are entirely illiterate, but they are usually not good citizens. The writer has in mind

a family who had a daughter fifteen years old. When the attendance law was passed the mother did not know the weak points in the law, so she put this girl in school for the first time, in Gainesville. They soon moved away. When school opened the following September and the writer made a census of her town she found this family. It took repeated visits to this home to get this family in school. There were also two little boys in this family in the primer class. They were always absent from school and the writer would go out and look them up, but she was helpless, only for persuasion, for that mother knew every weak point in the law and she knew that she was safe.

It is ridiculous that the law should allow the children to be absent from school one day in every week, or allow them to take the four days' leave of absence at one time. The attendance officer in one county reports a very broad use of the gap. She said that they used the last four days in one month and the first four in the following month, thus getting an eight days' leave of absence from school. They could go to grandma's for a ten days' visit and the law could not touch them. The law as it stands is a joke with those whom it was made to protect. If the children cannot be put into school and kept there, why pay an attendance officer? There is so much red tape about convicting an offender that the efforts are usually entangled in the tape and stopped. It seems ridiculous that a parent should be served a notice that the child was absent from school so many days. The notice of the child's absence is not turned in to the attendance officer until the end of the week. Some time during the next week the officer notifies the parent that the child is out of school. He waits until he gets the teacher's report the next week-end before serving official blanks to the patron. If the officer is successful in making out a case against him, the papers are turned over to the sheriff to serve. One officer said that his papers lay for weeks with the sheriff. There are no provisions for financial backing in this law, therefore we need not expect service.

Mrs. Bass, the attendance officer of Hillsboro County, whose work is principally in Tampa, suggests that, "A notice of the child's absence to the parent should be a notice to appear before court". This would save at least two weeks of

school for the child, and the court would tend to impress the parents with the graveness of this error.

Mrs. Bass suggests further that, "All disabled children should get exemption in writing before school opens". This would be a fine regulation, for then the teacher and officer would be saved the task of checking up and could explain to the children just why that pupil is out of school.

Mrs. Bass says that the greater part of this problem is not with the children but with the parents. They lack interest, they lack energy to cooperate and they lack the desire to cooperate. If the parent stands in opposition to the school, the child is likely to take the same stand. The matter of attendance is not a problem in the home where the parents give their children a real home and where the parents are school cooperators. It is not natural for children to dislike the mingling together at school.

The Biennial Report of the State Superintendent of Florida shows for 1920 that there were 36,421 children in the first grade and only 1,509 in the twelfth grade. (3:13.) Florida is no exception to the national rule of dropping out. There are great exoduses at the close of the fourth and the eighth grades. There are reported 2,458 more children in the fourth than in the fifth grade. Where did they go? The attendance laws did not give them permits to be out, neither did it keep them in. It is noticed in comparing the reports of two years back that there is some improvement in attendance. In 1918 there were 4,742 who entered high school, and 1,231 in the twelfth grade. In 1920 there were 5,754 who entered high school and 1,539 in the twelfth grade. This increase is caused by one of two things. The population of the state has increased or the popularity of the high school is increasing. The attendance law does not affect those in high school, for there is not even an attempt to make education compulsory above the eighth grade in this state.

The law as it stands is practically worthless, for increasing attendance, and it encourages children to have a low conception of the enforcement of the state's laws.

2. *Closer expert supervision:*

Rural schools can never be what they should be until they are supervised. The State provides supervision for our

high schools, but they do not need it as badly as the rural schools. The high school principals are usually trained men and they supervise the work of their teachers, while the rural teacher has no one to advise her and very few of the rural teachers are experienced teachers. The superintendents are so tied down with clerical work that they have very little time to spend out of the office. They do not really know their schools. The average length of the rural school term is more than two months shorter than the urban school term. Miss McDonald, State Rural School Inspector, in her report suggests that, "Inasmuch as these men are elected without any consideration for their educational qualifications for the office, it seems that they should not be expected to supervise the teaching, but that their work should be with the financial and clerical side and that expert supervisors should be employed. One look into the counties where this plan is followed is enough to convince anyone of its advantages. The counties which employ expert supervisors are doing much better educational work than those counties where the county superintendent attempts to supervise the teaching". It is easy to see that expert rural supervision will bring up the standards of the schools in the county. The rural schools must be supervised, if they are to improve. That is the best thing that can be done for the schools until there is some legislation that will require educational qualifications of the superintendents. If the superintendent is to have the direction of the school system, he might prove a millstone about the neck of the efficient supervisory teacher. If there can be only one expert in the county, let it be the superintendent, and let him do the supervising of the rural schools and employ enough office help to do the clerical work. The efficient superintendent has an idea of what kind of teacher is best fitted for different sections of the county. The law would not give the supervisory teacher power to place the teachers. Her work would be to suggest what is needed, but the superintendent can act. The schools will never improve and have a standard goal until the superintendent is an efficient school man. The efficient school man will have plans for his schools, and direct the teacher in putting those plans into action. We have men who are making plans that look well on paper, but if they do not go out and direct those plans they are worthless. For a plan

to achieve the most, the teacher must be able to see what it would be as a finished product. Can an untrained teacher who has never made plans take them and see a finished product? A man cannot supervise something that he knows nothing about. Those superintendents who have never taught, and who have never been schoolmen are figure-heads in the system. The superintendent should be the chief supervisor, but, there should be rural supervisory teachers paid by the county. These rural supervisory helpers should give full time to the rural schools. When the rural schools have expert supervision, then, and not until then, will there be improvement in the rural schools.

3. *Rural consolidation:*

The right kind of consolidation will help the rural schools as nothing else will. It is almost impossible to have expert supervision when a county has a great number of one-teacher schools. Consolidation for the rural school should be consolidation in the rural schools, and not consolidation of country in town. When the school is moved to the town the interests of the neighborhood follow the school. The people cease to have their old schoolhouse as a neighborhood center. They cease to plan for their old-time amusements. They lose interest in their neighborhood and it soon goes down. Consolidation for rural schools should be for the purpose of developing interest in the rural neighborhood.

Some of the one-teacher schools can never be consolidated. They are too far removed from each other. In the lake and Everglades region will be found schools of this type. There are no railroads and practically no dirt roads in some of these sections. One Superintendent said that it was impossible to drive an automobile in some of these neighborhoods. Consolidation would be impossible there. It seems a shameful waste of opportunities to consolidate the rural schools of good farming sections with those in some big town. The good farming section is the ideal place for consolidation. The school will develop the neighborhood and a course in agriculture may be put into the school. This will encourage the boys to stay on the farm and build up the country. The consolidated school in the country makes a satisfied farming people. They are

living well at home, getting a bank account and giving their children the advantages of a good school.

There is no state that has the climate that Florida has. She has twelve growing months in the year, with a soil that will produce if treated right. There are a great many failures in farming in Florida because the farmer does not know how to treat the soil.

The Government sent a representative down to look over Florida to estimate the possibilities of the bee industry. He spent several weeks in the state, and then reported to Mr. C. K. McQuarrie that this is the best territory for bees in the Union. He crossed near the central part of the Peninsula from East to West Coast and found there two very rare plants that produce a wonderful food for bees. The specialist was much surprised to find these plants in Florida, for he thought they grew only in Central America. The specialist said further that no section of the United States furnished as great a variety of bee feeding plants as Florida, yet there are very few sections that are really trying out the bee industry. Mr. McQuarrie says, "We get less than 10 percent of the actual nectar of the state". The Agricultural Extension Division would be glad to aid the county superintendent in finding out just what is best to put in the rural sections of his county. The superintendent should lead in developing those interests in his schools. Consolidation that has in view only the opportunity of putting the pupils in the classroom to recite is narrow and dangerous. It produces a discontented people. There is formed a dualism between school and the life they must live. Consolidation in the country is a consolidation of school and the life about them. Consolidation may be on a small scale at first, but hold on to it, keep it in the right place and build on it. It will broaden out. Give the rural neighborhood a high school, and do not send the children in to town for this work. The consolidated school should be a consolidation of every interest in the neighborhood. If it is a bee section, form a bee club. Encourage the children to grow new vegetables. Have a strong affiliation with the work of the County Agent and the Home Demonstration Agent, and thus lead the children to see that they are a part of the county and that their record does its part in giving the county its rank in the state.

4. *Cooperation with County Agent and Home Demonstration Agent:*

The brightest vision given the rural schools as they stand today is given through the Cooperative Extension Work in Agriculture and Home Economics. It has given more vision, more uplift, more competition and more real joy than any other one thing. The earnest teacher, who watches the interest of these rural children as they grasp and use the first opportunity given them for putting forth personal efforts, is impressed with the zeal of these children. They are getting in touch, for the first time, with life outside of the neighborhood. They are finding that their neighborhood is a part of the county, and that their county is really related to the State.

Those who are not interested in this Cooperative Extension Work are those who do not know, or who do not care to be bothered. The writer can never forget the interest of these rural boys and girls in the coming of the County and Home Demonstration Agents. That was a calendar day of the month. Every pupil in school knew which members of the clubs had chickens, pigs or something that had been prepared for the county exhibit. They eagerly asked, "Did you get a prize?" We all knew what the exhibits looked like, and we all knew which were selected for the Tampa and for the Jacksonville Fairs, and we all anxiously watched the mails to see which one won. The trips that these boys and girls have had given them to Gainesville and Tallahassee are the biggest opportunities that they have ever had. Eighteen counties in Peninsular Florida have county agents and fourteen counties have home demonstration agents. Three of these counties have one assistant each, making 17 home demonstration agents in this part of the state.

The home demonstration agents have gone into the homes. They have taught the mothers to make bread; they have taught the girls to sew and do other needle work. Some of the boys and girls are in the contest for the best garden. They are encouraged to try out new things. New vegetables are planted and they are taught new ways of preparing vegetables for the table. They are given canning weeks in which the agent goes out and superintends the canning of vegetables, fruits

and meats. The table is the same, but the menu is different and it has not increased the expense either. It was merely the waste conserved.

Florida has less milk than any other Southern state. These agents have plans for the year. They talk these plans so much that they sound like hobbies; every agent in the report told of her milk drive. One agent staged the drive so well that the children have carried it into the homes and parents are concerned enough to consult the agent about getting cows. The children are being weighed and they are ashamed of underweight, so that they are telling the parents what can be done.

An agent told this incident of her milk drive. She and Miss Morse, the State Dairy Agent, were in a home that had few comforts, but the people were able to have a comfortable home and plenty of wholesome food. In this home was a little boy about twelve years of age. The agent said that he could not have been more than three and one-half feet tall and greatly underweight. They asked the mother if they had cows, and she replied, "Yes, we are milking several, but we don't save very much milk for we want to raise the calves". Miss Morse asked the little underfed, underweight boy if he liked milk. The mother replied to the question by saying, "No, he never did like milk". The little boy added, "Why, Ma, I don't know whether I like it or not; I never tasted it".

Is it not tragic when the mother is more interested in feeding and raising calves than in feeding and raising her own children?

In another county the Home Demonstration Agent told the following incident: This agent had come in from a long trip in the country and this incident had happened that morning. She had gone out to give a bread-making demonstration. These people were able to have comforts. She went with them over the farm to see the corn, and she said that they had a fine crop of everything. She asked if they got plenty of milk. They replied that they had several cows, but they had to keep up the calves so they gave all the milk to the calves to keep from hauling water for them. This man had married children and had lived on this place as a boy, yet he was still hauling water in dry seasons. This agent said this family

had nothing in the way of screening or any sanitary equipment. They did not even have an old-time privy.

Some short-sighted people have wanted to discontinue the work of the county agent and of the home demonstration agent on the plea of hard times. If the commercial side is the only thing to consider, they are a paying investment. They are the farmer's best friends. It is through these agents that the rural boys and girls are connecting their lives and interests with the lives and interests outside of their own neighborhood. It would be almost criminal to take these agents from the rural districts.

5. *Efficient, trained, satisfied teachers:*

If Florida had efficient, trained, satisfied teachers in her country districts, she could feel sure of progress. The best teachers are put in the urban schools and the rural child never gets the benefit of their experience until he is in high school. Very few of these children reach high school. Mr. Price of Putnam County has the best record of this. Four years ago there were four rural pupils who came into Palatka to take high school work and this year there are sixty-two. He gives uniform examinations to the rural children, and the papers are graded in his office and certificates granting entrance to the ninth grade are issued. There have been over one hundred certificates issued this term, 1921. These children are given transportation, or the Board allows them so much for board money to spend to attend high school. This is good only for the individual child. The neighborhood is not benefited unless that pupil is satisfied to go back and build up her home neighborhood.

There are places that cannot be consolidated, but the children in these places are given an equal chance with the children in the county for high school work. But where they can be consolidated, it is better than to send the children from home. If there were better trained teachers in the grades, the number entering high school would greatly increase. This would be especially true of the country, for so few of the country teachers are trained. It takes the children so long to finish the eighth grade and then there is not much to it. It has not been presented in a way to correlate with the life about them. They know a few facts, but they have never

thought that these facts had any relation to the life about them .

It is hard for the teacher of a one-teacher rural school to be satisfied. She may be trained and efficient, but it will be hard for her to be satisfied. There are so many things to do, so many obstacles to overcome, that she becomes discouraged. She may not be dissatisfied with the place or the people, but she may feel that her work is not counting for enough. However, very few teachers with so much concern for their work ever fail. The people will recognize her value and she will stay.

A better standard of work must be realized down in the grades. The trained superintendents are recognizing this need. Throughout the state undue prominence is given to high schools. Much inspection and supervision have been centered there that should have been done in a very intensive manner in the lower grades. Four years of high school work can do little good to a child who comes up through the grammar grades with weak training. Then there must be encouragement given the rural teacher. The report from the United States Bureau of Education shows that the average salary for the country teacher is $361.00, while the average salary for the urban teacher is $649.00, nearly twice as much. (11:5.) The rural teacher has no supervisor and she must have had experience and training if she is a success, while the urban teacher is closely supervised and may make a success without training. The rural patrons must meet the demands. They must be made to see that it is a paying investment to keep their school in touch with their neighborhood. They should be led to see that the best, most proficient teacher is not too expensive for their children. The writer is of the opinion that if we had superintendents who did expert rural supervision, we would soon have rural neighborhoods demanding the best teachers and willing to pay for the best. If they have never had an efficient, trained, satisfied teacher, how can they know her value? If they do not know her value, are they likely to offer salary inducements? It is natural for one to want a vision of what his money will buy. The expert superintendent can tell them what their money will buy, and the trained teacher can show them the results of a good investment.

6. *Teacherages:*

The teacherage has not yet become popular in Florida. There are less than one dozen in the Peninsula. Lee County probably holds the honor for the first teacherage in this section, located at Alva, while Polk County comes first in the number of teacherages. Those in Polk are not all owned by the district; in fact, none of them are owned entirely by the district. Polk County is in the heart of the phosphate region. These mining corporations have put in teacherages because they know that the satisfied teacher is more proficient. These mining towns usually keep their teachers from year to year. The principal of one of these towns has had the appointment for nine successive years and the principals for two others for five and three years respectively. They are satisfied, for they are given a home furnished free of rent. There are a number of other favors shown to the teachers. These towns are rarely ever found hunting teachers, but teachers are hunting them. This is the one educational movement of the Peninsula that is leading in the rural districts. Teachers often rent furnished apartments in town and do light housekeeping, but School Boards do not own furnished homes for the teachers. Board is very high in tourist towns. Teachers pay as high as sixty dollars per month for board in these towns. A member of the Board said that Dade County has two teacherages, but they have not proven a success because the teachers could not live peaceably in the same home. If teachers cannot agree in the same home, they cannot agree at school.

Volusia County has one teacherage and Orange County has two. A number of the superintendents are interested in teacherages, and the movement is growing in popularity. There will be a marked improvement in the schools when the satisfied teacher is given a home and she is made to feel that she is building up her own neighborhood.

7. *School activities leading children to beautify their homes:*

Every time the question of campus conditions was asked, superintendents replied immediately on the conditions in the high schools. When they were told that the question had reference to the rural districts, the reply was invariably changed.

There is very little pride taken in the school grounds. Some of the high schools do not have pride along this line. When the grounds are kept in the high schools it is done by the janitor and not through the efforts of the teachers and pupils.

Pinellas County put on a campus contest last year. A prize was offered to the school that had the prettiest campus. The school that won spent $1500.00 on their campus. A campaign like that encourages campus pride, but there is a more loyal pride when the children help to build it up, and the Board is not responsible for results.

More than half of the rural schools are not even fenced. They have no pride at all. The teachers are largely responsible for this lack of pride. Children will eagerly enter into beautifying movements if they are only led.

Many of the superintendents are not interested in the school grounds. Only one reported that he considered the grounds as one measurement of the teacher's efficiency. The general neatness of the whole school property should count toward a teacher's efficiency.

This is the best avenue the teacher has of giving the children ideas of beauty to take into the home. The children will want flowers in their homes if they have them at school. The right kind of pictures should be used in the schoolrooms and these pictures should be studied with the children. The framing and hanging of the pictures should also be commented on. Different color schemes for rooms should be brought out.

The Rural School Inspectors have aroused much competition in schools by their system of grading the rural schools for standardization. Pupils are anxious for their school to standardize, and they enter into the prospect with zeal. Several of the points for standardization are points of neatness and improvement that the children can be responsible for. This is a strong point of the standardization table. The children, the patron and the teacher have standards to meet.

8. *Organized and directed play:*

Organized and directed play is more neglected than any other school activity, but it has more of the elements for character-building than any other one thing in school. The

average teacher does not realize what the mingling through play would mean to her. She feels that she would rather spend the play-time away from the children. There is very little organized play. The stronger children are likely to domineer over the weaker if the play is not directed. The principals of the larger schools have the teachers take turns at play-ground duty, but that is not really supervised play. In the small schools, play is supervised only when each teacher goes out and directs the play of her own room. Some teachers of the one-teacher schools direct their play. In this survey of these counties, only one school with several teachers was found that has really organized and directed play. This is in the Model Rural School of the State at Brewster. In this school every teacher is expected to go on the grounds at recess and to play. The comradeship of teacher and pupils is very strong. The pupils have an opportunity of knowing the teacher through play, as well as through work, and the teacher really learns to know her pupils by this double intercourse.

People are just waking up to the fact that play should be directed. It has been the custom to direct play only as a coach for different ball games, but to direct play so that it will serve a greater purpose is a new reason for its direction. The selection and training of the best players for match games is not directed play. The ones who really need to play are left out and the stronger ones often injure themselves by overplay. The coaching for match games should not be at the recesses. That time should be used for all of the children. Each county in North Carolina has a play director whose duty it is to teach games to the children. There are very few of the peninsular superintendents in favor of such a director. There are few play enthusiasts, just as many opposers and quite a few neutrals among the superintendents visited. There were many neutrals because they did not know enough to oppose or to take a stand for it.

9. *Parent-Teachers' associations:*

There are some fine school and home organizations in the different counties. Several counties have them in the rural districts. This is especialy true of the counties that have progressive Home Demonstration Agents. These agents are organizers of home and school interests. These organizations

are proving very helpful to teachers who are anxious to serve the people. The mothers know the teachers better after they have met them in these organizations. In every instance where there is play-ground equipment in the rural districts, it was put in by some associations of patrons. The organization serves its purpose when the parent recognizes the needs of the child through the teacher.

C. Summarized Comments.

Definite information along some lines considered in this discussion is very meager. The superintendents were inclined to want to sugar-coat their reports. It took numerous questions to find out the things that they did not want to tell. One superintendent was asked about the conditions of the school grounds. He replied that they were well kept by a janitor. He was then asked if they were well kept in the rural districts, and he replied, "Very nicely kept". He was asked about flowers. He replied, "Some flowers". The writer then asked, "Are they all fenced?" He replied, "Mostly". The next question was, "About what percent are fenced?" He finally reached for his record book and found by actual count that there were four out of fifteen rural schools in the county with the yards fenced. This is an example of attempted sugar-coating. In some instances the superintendents did not know. They had been in office only a short time and seemed to know absolutely nothing about their counties. They seemed to have no idea of what was needed and therefore had no plans.

The writer was impressed with the bonds that are tying the educational system down. So many of the superintendents are keeping their hands on the pulse of the county board, and the leading men in their county, that they have no time to make and work out plans, and they are afraid to try. The tourist problem is over-shadowing everything else. No superintendent dares to say anything that will give his county a low rating from a tourist standpoint. Only one county, Palm Beach, admits that there is a tourist problem, and they are trying to do more than any other county to solve the problem. The opportunity teacher is used in that county when they have funds. The reader may say, "How does this apply to the rural districts?" Just here. These conditions are true in the rural towns and most of these tourists' counties have

rural demonstration teachers and when the funds run low these are the first teachers who are taken off the teaching list, thus leaving rural teachers without supervision. These counties are hopelessly in debt, and the funds are not sufficient to run schools for their own children. (3:29.) Then when the tourists come and crowd the schools there must be a break. Florida has the county unit system, so the rural schools suffer.

This expression is often heard, "They certainly do bleed the tourists in that town", meaning that they charge them such extortionate prices. The rural districts are living under the same price mark. The people are not happy. They are always feeling that they are not getting a square deal. This standard of living is developing the chance-taker. He plans to "do them first".

There is little real home life in the tourist sections. The owners of homes will probably rent out all of the house except the kitchen and dining room, and they crowd up in these little rooms all winter. It is claimed that the tourists leave 30,000,000 dollars in the peninsula yearly. (26:5.) What does $30,000,000 mean when everything in the community is priced so high—when our schools are crowded out—when our homes become rooming houses—when our children are brought up to adopt floating financial systems of business? The tourist problem is so new and is growing so rapidly that the people are overcome with the greatness of it. They like the excitement of it, and are cultivating the tourists. They are putting them before their children in school, and before their families at home.

Some of the County School Boards are hopelessly in debt, caused chiefly by spending beyond their means to serve the tourists. (3:29.)

The writer tried to find out just how much of the county funds were spent on the rural schools, and how many annual visits the superintendents made to the rural schools, but there were not enough replies to tabulate. One man replied by saying that he did not have time to tabulate. One man replied by saying that he did not have time to get up the data. Others did not reply at all. A full report of conditions in the rural schools cannot be obtained until the county superintendents have records of which they are not ashamed.

The writer made every effort to get definite statistics on the health conditions of Peninsular Florida, but there is very little organized material and what there is is not given to the public. The health officials, too, think of the tourist first. The whole thing seems a plan that more tourists may come.

Following this chapter is a list of questions which the writer asked the superintendents, and a table of replies, also graphs, illustrating rural school conditions in Florida. The table of replies is not absolutely authentic for the men, not knowing their counties in some cases, made estimates. These estimates were not always correct, for some superintendents reported no libraries when they had standardized rural schools in the county, and one point required for standardization is a library, the minimum value of which is ten dollars.

D. QUESTIONS, TABULATED REPLIES AND GRAPHS:

Questions asked County Superintendents:

1. How many senior high schools in your county?—12 grades?
2. How many intermediate high schools in your county? —11 grades?
3. How many junior high schools in your county?—10 grades?
4. How many and what types of rural schools have you?
5. What salary is paid?
6. Do you have teacherages? This led up to price of board and accommodations.
7. What is the length of term?
8. How many grades in the average rural school?
9. Do you have domestic science and manual training?
10. Are the high schools well equipped?
11. Are the rural schools well equipped?
12. Do the teachers and pupils take pride in the campus?
13. Do your teachers have flowers at school?
14. Do your schools have play-ground equipment?
15. Is the attendance law helping in this county?
16. How many pupils in the county?
17. How many graduates in the county?
18. What percent of the graduates go to college and where do they go?

19. Are you consolidating, and how is it working?

20. How many are you transporting? Do the pupils like it?

21. Do you have a county nurse?

22. Do you have a Home Demonstration Agent?

23. Do you have a County Agent?

24. Do you have libraries in your school?

25. What kind of toilets do you have?

26. Do your teachers supervise play?

27. What county organizations do you have?

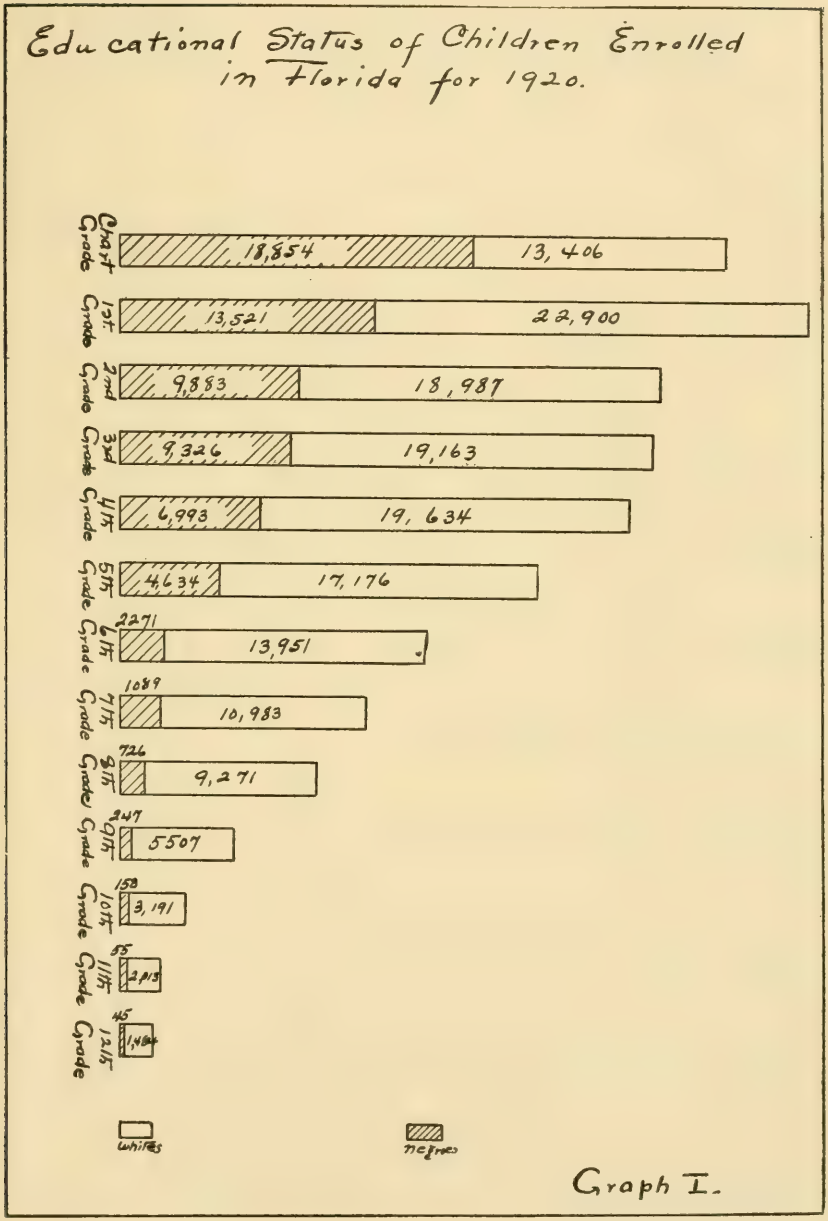
28. Have you a tourist problem in this county?

29. What are you planning to do for the schools while in office?

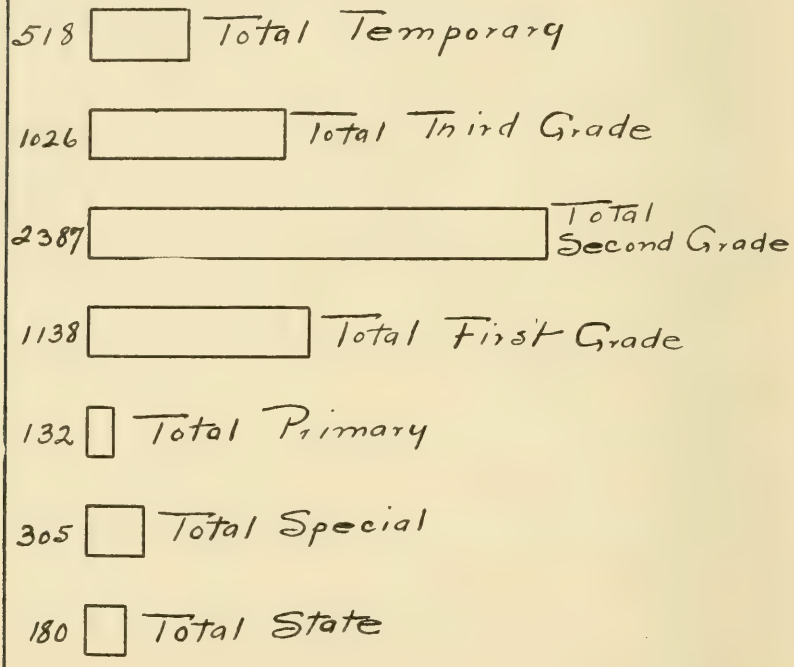
30. How are you going about it?

	Alachua	Brevard	Broward	Citrus	Dade	DeSoto	Flagler	Hernando	Hillsborough	Lake	Lee	Levy	Manatee	Marion	Monroe	Okeechobee	Orange	Osceola	Palm Beach	Pasco	Pinellas	Polk	Putnam	Seminole	St. Johns	St. Lucie	Sumter	Volusia
Senior High Schools	4	2	1	1	1	4	None	None	3	2	2	None	3	2	1	None	2	1	2	1	4	5	3	1	1	2	2	3
Intermediate High Schools	3	None	None	1	None	None	None	None	None	1	None	1	None	None	None	None	None	1	None	1	None	None	None	None	None	None	None	None
Junior High Schools	5	2	1	1	None	2	1	1	3	3	None	None	None	4	None	None	2	None	1	None	2	2	None	1	2	1	4	None
Rural Salary	$60-$100	$85-$125	$108	$75-$125	$90-$125	$60-$95	$90	$70-$100		$80-$100	$70-$90	$60-$100	$75-$125	$80-$125	$90-$95	$75-$100	$75-$125	$80-$125	$70-$125	$80-$100	$85-$125	$75-$125	$80-$125	$90	$80-$90	$85-$100	$75-$80	$75-$1
Teachers' Home	None	None	None	None	Two	None	None	None		None	One	One	One	None	None	None	Two	None	None	None	None	In mining towns	None	None	None	None	None	One
Length of Term	6-8 Mo.	8 Mo.	8 Mo.	7 Mo.	8 Mo.	6-8 Mo.	6-8 Mo.	8 Mo.		6-8 Mo.	8 Mo.	6 Mo.	6-8 Mo.	6-8 Mo.	6 Mo.	6-8 Mo.	8 Mo.	6-8 Mo.	8 Mo.	6-8 Mo.	8 Mo.	6-8 Mo.	7-8 Mo.	6-8 Mo.	6-8 Mo.	6-8 Mo.	6-8 Mo.	8 Mo.
Domestic Science	None	Yes	Yes	One School	Yes	Three Schools	None	None	Three Schools	Yes	Yes	One School	None	Yes	None	None	Yes	Yes	Yes	None	Yes	Yes	Yes	None	None	One School	None	Yes
Manual Training	None	Yes	None	None	Yes	Two Schools	None	None	Two Schools	Yes	Yes	None	None	Two contracts	None	None	Yes	Yes	Yes	None	Yes	Yes	Yes	None	None	One School	None	Yes
School Equipment	Fair	Above Average	Above Average	Fair	Above Average	Poor	Very poor	Below Average		Averages good	Very poor	Very poor	Above Average	Poor	Poor in rural	Fair	Good	Poor	Averages fair	Very poor	Good	Fair	Poor	Poor	Very poor	Very poor	Very poor	Very
Care of Campus	Very limited	Very limited	Neglected	Limited	Neglected	Neglected	No care taken	No pride taken		Very little	No pride	No pride	Very little	Very little	No care	Some interest	Limited	Very little	No rural pride	Very limited	Good	Good	Pride increasing	None	No pride	No pride	No pride	Good
Playground Equipment	Very little	Very little	Very little	None	Good	Practically none	None	None		Being installed	Very little	None	Very little	None	None	Very limited	Very little	Very little	Very little	None	Good	Fair	Meager	Meager	None	Very little	None	Good
Attendance Law	Good results	No good	Satisfactory	No officer	Excellent Service	Increased Attendance slightly	No officer	No officer	Most excellent officer	No good	Good officer	No good	Good work	Little good	Good work	About average	Satisfactory	Good work	No county officer	No officer	Good work	No force	Good officer	No officer	Some interest	No interest	Increased attendance due to law	Good W
Pupils to County	9650	1700	1640	2545	1640	5182	400	1400		3218	1800	2349	3387	6500	3000	189	4464	1666	2547	1785	4781	7803	6000	2800	2400	1800	1500	470
High School Graduates	40	10	25	9	52	57	None	None		37	16	None	3	40	16	2	36	15	30	None	143	143	12	40	20	About 11	About 20	60
Number Entering College	20%	Good percent	30%	None	50%	25%	None	None		Good per cent	50%	None	Good percent	Good percent	50%	50%	30%	75%	95%	None	Large	Good percent	100%	75%	90%	50%	40%	All
Consolidation	Well consolidated	Of country to town	Of country to town Into G. schools	None	All but 5 schools	Not successful	None	None		Some	Of country to town	None	None	Of country to town	None	From country to town	Large scale	From country to town	Country with towns	None	Of country to town	Very little	Done country to town	Plans for G. to town	From country to town	Country with towns	None	Some
Transportation	800 in 20 buses	Provided for	Meets demands	None	Meets demands	Little need	30 pupils	No demand		Meets demands	Provided for	No demand	From rural to town	Meets demands	Not necessary	Only to town	Provided for	Well provided for	Many to towns	None	Meets demands	Not necessary	Well provided for	Meets demands	In town, partial	Rural to town	None	Spec $12
County Nurse	Yes	Yes	None	None	None	None	None	None	Yes	None	Yes	None	Yes	None	None	None	Yes	None	Yes	None	Yes	None	None	None	Dental only	None	None	Yes
Home Demonstration Agent	Yes	None	Yes	Yes	Yes	Yes	None	Yes	Yes	Yes	Yes	None	Yes	Yes	None	None	Yes	Yes	Yes	Yes	Yes	Yes	Yes	None	Yes	None	None	Yes
County Agent	Yes	Yes	None	Yes	Yes	Yes	None	Yes	Yes	Yes	Yes	None	Yes	Yes	None	None	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	None	Yes	None	Yes
Rural Libraries	In every school Minimum $100	5	In all schools good	In rural standard level	In all schools limited	Very meager	None	Very meager		Three in county above standard	Very meager	None	In every school	None	None	None	In all schools range $50-$1000	Four—$125 each	None	In rural standard level	In every school	In few schools	Few rural	None	Only one	Very meager	Very meager	Good aver
Toilet Equipment	75% Septi 25% privies	Fair	Best sanitary	Privies but chem. used	Best Sanitary	Unsanitary	Old-time privies	Old-time privies		Privies with chemicals	Old-time privies	Old-time privies	Sanitary chemicals	Very poor	Old-time privies	Good sanitary	Old-time privies	Old-time privies	Privies with chemicals	Old-time privies	Sanitary water	Old-time privies	Average poor	Old-time privies	Old-time privies	Sewerage—septic—Old-time privies	Old-time privies	Sanita
Supervised Play	Very little	Partial	Partial	None	None	Very little	None	None		None	None	None	Very little	None	None	Very little	Very little	None	None	None	Little	Some	No operation	None	None	None	None	Som
School organizations	Fairly good	Best Child Welfare	Well organized	None	Well organized	Poorly organized	None	Very meager		Very best	Very little	None	Well organized	Very little	None	None	Well organized	Good	Good	No rural clubs	Well organized	No rural clubs	Good in town	Well organized	Poorly organized	Very little	None	Well organ

A Graphic Table of the Conditions as Found in the Rural Schools of Peninsular Florida


Educational Status of Children Enrolled in Florida for 1920.
Chart Grade
18,854
13,406
1st Grade
13,521
22,900
2nd Grade
9883
18,987
3rd Grade
9,326
19,163
4th Grade
6,993
19,634
5th Grade
4634
17,176
6th Grade
2271
13,951
7th Grade
1089
10,983
8th Grade
726
9,271
9th Grade
247
5507
10th Grade
158
3,191
11th Grade
55
1,213
12th Grade
45
1,484
Whites
Negroes
Graph I.

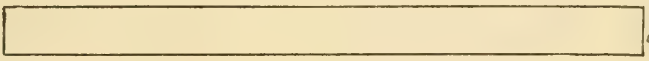
Parent, do You know the Qualifications of the Teacher who teaches Your Child? She is on this List. 1919.

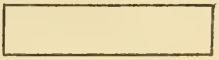


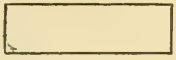
And You Select Her for Your Child.

Graph II.

The Statistics of 1920 Show the Standards Lower Than for 1919
(See Graph II)
1920







It is up to you, Mr. Superintendent, to say, "My county does not need four times as many Third Grade teachers as First Grade teachers."

Graph III.

Florida's Standing As Compared With States of Highest Rank

Percentage of School Population Enrolled

Percentage of Enrolled in Daily Attendance

Average Length of School Term in Days

Average Days Schooling per Child

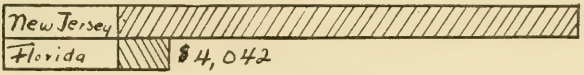
Percentage of Men Teachers

The latest available statistics in these comparisons are for the school year 1918, while those of Florida are for the year 1920 — two years later — which is slightly to the advantage of Florida.

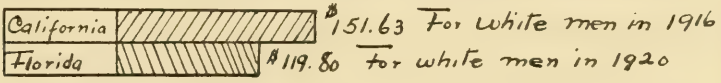
Graph IV.

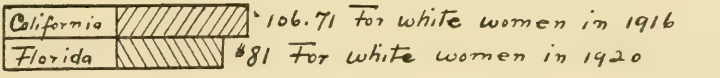
Florida's Financial Status As Compared With States Ranking First

I. Average Value of School Plants

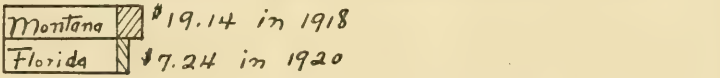


II. Average Monthly Salaries Paid Teachers

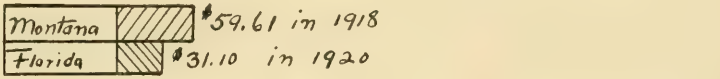




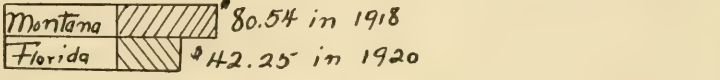
III. Average per Capita Expenditure for Schools



IV. Cost per Capita Based on Pupils Enrolled



V. Cost per Capita Based on Pupils in Daily Attendance



Graph V.

CHAPTER V

CONCLUSION

The most important medium for judging nations and countries of the past has been and is now through their literature and the written records they have left; then, if we judge Florida by the same system, we must take the records that she is giving out. After a few of the following statistics are compared, it will be easy for the writer to substantiate the statement that Florida is measuring herself on the dollar basis and not in terms of educational progress.

In the last decade the school enrollment has increased about 58 percent. (3:13.) The average salary of the teacher has increased only 51 percent. (3:16.)

The assessed valuation of Florida increased 94.5 percent from 1910 to 1919. The bank deposits of Florida have increased 205 percent in the last five years. (26:10.)

Florida has three great interests in which she leads the other states of the Union. These interests, turpentine, phosphate, and the manufacture of tobacco, put millions of dollars into the state every year. (26:5.) The tourists spend in the state thirty million annually, while the produce sold from the farms per annum amounts to $80,000,000.

With all of these millions of dollars that come into the state and the millions that are made in the state in a year, we find rural children getting as low as five months of school per year, and there is a decided movement to shorten terms for the school year 1921-22, and to pay the teacher less per month.

The statistics of 1920 show that Florida had 71,811 illiterates. There has been an appreciable decrease since 1910. In 1910 the statistics show that 13.8 percent of the population were classed as illiterates. In 1920 there were only 9.6 percent in this class. There is more illiteracy in the rural districts of the state than in the urban, the percentage being 12.2 for the rural population and 5.4 for the city population.

It is disgusting to one who really knows the extreme needs of the rural schools to see so many inducements offered to the tourists. When the city school suffers the rural schools must suffer also, for Florida's school system is built on the

county unit plan. The "Tin-Can Tourist" can hardly be classed short of an intruding nuisance. Some towns, during the last tourist season, gave these people camps with free lights and water, while often these tourists lived in the camps and worked in competition with the men who were tax payers in the towns.

It seems that the towns, in trying to advertise themselves, are neglecting home interests. There are times when one can do more for strangers than the strangers expect to have done. The writer is of the opinion that this is being done now in Florida when parents rent their homes from the children, when they allow their children to be crowded in school and when the wage scale of the community is lowered by unfair competition. Money should never be a medium of exchange for a child's opportunity in life.

The list of questions given on pages 71-72 was used merely as a guide in getting reports from superintendents on school conditions in their respective counties. These questions led up to other discussions, and the writer usually spent a full morning with each superintendent. In some cases the superintendent seemed reluctant to give data and appeared bored.

The writer also took notes from discussions with the home demonstration agents, county nurses, attendance officers and talked to various other persons about rural conditions. The replies to the questions tabulated on the attached folder are far from being definite and complete, yet they give a fair estimate of conditions as they exist, and represent an earnest effort toward that goal.

If the child's home life is practically given up; if attendance is irregular; if the children are crowded in school; if the school term is shortened; if the teachers are untrained; if there are no educational requirements demanded of county superintendents; if the salaries of teachers are lowered; if schools are not well equipped; if the state schools cannot furnish adequate training for the teachers; if the legislators are not men broad-minded enough to see the educational needs of the state; if our state officials are satisfied with our educational standing; how can we educate our children? The solution is with the legislators. It is they who will give or take away this opportunity.

Our legislators should be educated men, men who are concerned enough about the educational standard of the state to stand out fearlessly for the promotion of every child's good; then, and not until then, will Florida lose her rank of fortieth in educational standards.

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